Kant’s Response to Hume in the Second Analogy

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THESIS

Submitted as partial fulfillment of the requirements
for the degree of Doctor of Philosophy in Philosophy
in the Graduate College of the
University of Illinois at Chicago, 2015

Chicago, Illinois

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This thesis is dedicated to my dear sister, Sibel and my dear friend, Keziban.
ACKNOWLEDGMENTS

There are so many people whose constant guidance and support made this project possible in the first place and enabled me to finish it.

First of all, I would like to thank my supervisor, Daniel Sutherland. He has been a true role model for me, not only because he is a brilliant philosopher, excellent academician, and a dedicated mentor, but also, and perhaps most importantly, he is a perfect example of a person who strives for excellence in everything that he does and treats everyone with great respect while doing it. I feel extremely fortunate to have the opportunity to be one of his students.

I would also like to express my sincere gratitude to my dissertation committee members Sally Sedgwick, Samuel Fleischacker, Mahrad Almorahari and Michael Friedman for their patience, guidance and insightful comments. Sally Sedgwick and Samuel Fleishacker have been closely involved in the project from the very beginning. If my arguments are clear, it is thanks to their meticulous work and detailed feedback on earlier drafts. I would like to thank Michael Friedman also for inviting me to Stanford. His class has been extremely informative and inspiring. I am deeply grateful to him and Graciela De-Pierris for their warm welcoming, generosity and kindness.

In addition to my dissertation committee, I would like to thank other faculty members and graduate students at UIC for everything they have taught me and making this long and difficult journey fun. In particular, I would like to thank Valerie Brown, Walter Edelberg, David Hilbert, Nick Huggett, Peter Hylton, Charlotte Jackson, Jon Jarrett, Georgette Sinkler, Anthony Laden and John Whipple. I would like to extend my gratitude to Lucas Thorpe and Burkay T. Ozturk, whose enthusiasm and dedication to philosophy has inspired me to pursue academic career. I will be eternally grateful to all of these people for all their support and help.
ACKNOWLEDGMENTS (continued)

I was also very fortunate to have the support of many friends who helped me keep going and remain positive. I am deeply grateful for all the love I received from Ozlem Aksoy, Eda Anlamlie, Eser Bakdur, Esra Aydemir Cavus, Sibel Deniz, Keziban Der, Kamran Fallah, Hande Gunay, Reza Hadisi, Seyit Kale, Nicholas Garcia-Mills, Hyacinth Piel, Parisa Sabet, Filiz Yayla, Pinar Uner Yilmaz.

Last but not the least, I would like to thank my parents, my sister and brother in-law for their unconditional love and encouragement.

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<th>Description</th>
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<tr>
<td>CP</td>
<td>Causal Principle</td>
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<tr>
<td>EHU</td>
<td>Enquiry Concerning Human Understanding</td>
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<tr>
<td>JL</td>
<td><em>Jäsche</em> Logic Lectures</td>
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<tr>
<td>MFNS</td>
<td>Metaphysical Foundations of Natural Science</td>
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<tr>
<td>SEP</td>
<td>Stanford Encyclopedia of Philosophy</td>
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<td>PUN</td>
<td>Principle of the Uniformity of Nature</td>
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<td>T</td>
<td>Treatise Concerning Human Nature</td>
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SUMMARY

My dissertation aims to solve what I call Kant’s “problem of empirical laws,” a problem concerning the coherence of Kant's claims that empirical laws as laws express a kind of necessity, and as empirical they are contingent. In the literature, this issue is usually framed in the context of Kant’s relation to Hume and formulated as a question of whether Kant agrees with Hume that empirical laws are mere contingent generalizations. According to those who argue that Kant’s main disagreement with Hume concerns the status of the Causal Principle, Kant agrees with Hume that empirical laws are contingent empirical generalizations. The defenders of this view, to which I refer as the “modest reading,” maintain that Kant’s argument in the Second Analogy of Experience (henceforth, Second Analogy) aims to respond to Hume’s “problem of causation,” a problem that questions the apriority and necessity of the Causal Principle alone. On the modest reading, Kant’s Second Analogy argument proves neither the existence nor the necessity of empirical laws. Others who claim that Kant disagrees with Hume on the status of empirical laws, on the other hand, argue that Kant’s Second Analogy argument proves not only the necessity of the Causal Principle but also the existence and the necessity of empirical laws. Proponents of this “strong reading” of the Second Analogy argue that by proving that there are necessary empirical laws, Kant aims solve Hume’s “problem of induction,” a problem that questions the validity of our belief in the uniformity of nature.

After I demonstrate the textual and philosophical problems with both of these readings, I present a novel account of what Kant establishes in the Second Analogy. While the modest and the strong readings agree that in the Second Analogy Kant responds to Hume, they disagree on the nature of the Humean problem Kant wants to solve. In order to understand the nature of these problems and identify the requirements for their solution, I first examine Hume’s formulation of
the problems of causation and induction. Then, I closely examine Kant’s perception of these problems by closely analyzing the texts, where Kant refers to Hume and Hume’s problem. Textual evidence reveals that Hume, on Kant’s view, focused mainly on the validity of a single metaphysical concept and principle, namely the concept of causation and the Causal Principle. Hence, the Humean problem that Kant aims to solve in the Second Analogy requires a demonstration that the concept of causation and the Causal Principle are justified *a priori*.

Having identified the Humean problem, I focus on Kant’s Second Analogy argument where Kant proves the apriority of the Causal Principle. Contra the modest reading, I argue that in the Second Analogy Kant proves the validity of the Causal Principle by proving the existence of law-governed causal relations, which requires the demonstration that all causal relations are subsumed under some necessary empirical law. Thus, even if we cannot have insight into the necessity of individual empirical laws, Kant’s Second Analogy argument shows that if empirical laws are true, they are necessarily true. In contrast with the strong reading, however, I argue that the existence of empirical laws does not guarantee the uniformity of nature. Hence, even though Kant’s Second Analogy argument lays the ground for a satisfactory solution to Hume’s problem of induction, Kant undertakes that task beyond the Second Analogy. In this respect, my dissertation contributes to the literature by (i) demonstrating the false dichotomy between the weak and the strong readings, which respectively assume that in the Second Analogy Kant is either concerned only with the Causal Principle or he is concerned with Hume’s problem of induction and (ii) offering a middle ground that fits better in Kant’s overall project both textually and philosophically.
CHAPTER I: INTRODUCTION

A. Kant’s problem of empirical laws

This project identifies an important problem in Kant’s writings, to which I refer as Kant’s “problem of empirical laws.” The problem of empirical laws arises from an apparent inconsistency in Kant’s conception of empirical laws. On the one hand, Kant suggests that empirical laws *qua* laws are necessary rules, on the other hand, due to their empirical origin they are merely contingent. In order to solve this problem, therefore, we need to determine whether Kant can account for the lawfulness and empirical origin of empirical laws in a coherent manner. As we shall see, commentators support their different accounts of empirical laws by referring to Kant’s argument in the Second Analogy of Experience (henceforth the Second Analogy), which is one of the most controversial texts in Kant’s writings. Commentators agree that in the Second Analogy, Kant responds to the Humean problem, which inspired Kant to abandon his dogmatic commitments and develop his own critical philosophy. While Kant scholars agree that the Second Analogy responds to the Humean problem by proving the apriority of the Causal Principle, which roughly states that every event has some cause, they disagree on whether it also proves the existence of the particular empirical determinations of this general principle, namely particular empirical causal laws.

If the Second Analogy proves the existence of particular empirical causal laws, it means that some empirical laws, for Kant, have an *a priori* grounding in the faculty of understanding. This in turn might allow Kant to attribute some kind of necessity to empirical laws that mere inductive generalizations would lack and thereby stress the lawfulness of empirical laws while also admitting their dependence on experience. If the existence of particular empirical causal
laws is not guaranteed by the Second Analogy argument, on the other hand, it seems that Kant agrees with Hume that we know empirical laws only through experience, and therefore they are nothing more than merely contingent empirical generalizations.

Having an accurate interpretation of the Second Analogy, therefore, is essential for solving Kant’s problem of empirical laws. Despite its significance, however, we cannot arrive at a comprehensive account of Kant’s conception of empirical laws simply by focusing on the Second Analogy. In addition to Kant’s writing in the *Critique of Pure Reason* (henceforth the first *Critique*), we shall examine *Prolegomena to Any Future Metaphysics* (henceforth the *Prolegomena*) and the *Critique of Judgment* (henceforth the third *Critique*) and analyze how Kant describes empirical laws in those texts.

As we shall see, Kant’s writings present further challenges for us. For instance, some of the passages in the third *Critique* appear to be in conflict with Kant’s assertions in the first *Critique*. Due to this apparent inconsistency in Kant’s writings, some scholars simply conclude that Kant lacks a univocal account of empirical laws. That is, the apparent tension in Kant’s texts is viewed as further evidence for the view that Kant lacks a well worked out and uniform account of empirical laws.

In contrast with this kind of reading, this project aims to advance a coherent account of Kant’s conception of empirical laws. My overarching goal, therefore, is to solve Kant’s problem of empirical laws by explaining the coherence of Kant’s apparently conflicting philosophical commitments and seemingly inconsistent writings. Before I offer my solution to this problem, however, a brief analysis of the two main positions on Kant’s conception of empirical laws is in order.
B. Possible Solutions to Kant’s Problem of Empirical Laws

(i) Empirical laws are contingent

According to some scholars, Kant agrees with Hume on both the empirical origin and the contingency of empirical laws. Kant’s main disagreement with Hume, on this reading, concerns only the status of the Causal Principle. The defenders of this view, therefore, argue that in the Second Analogy Kant responds to the Humean “problem of causation,” which is a problem about the status of the Causal Principle alone. The Second Analogy, it is argued, establishes neither the existence nor the necessity of empirical laws. While there are some passages both in the first and the third Critiques that seem to support this solution to Kant’s problem of empirical laws, as we shall see, there seems to be equally strong textual evidence against reading Kant in complete agreement with Hume on the status of empirical laws.

(ii) Empirical Laws Are Necessary

Those who argue that empirical laws, for Kant, are necessary rules, on the other hand, offer a different interpretation of the Second Analogy argument. On their reading, the Second Analogy provides an a priori justification for the existence of necessary particular empirical casual laws. On this reading, the Second Analogy addresses the Humean “problem of induction,” a problem about the justification of our belief in the uniformity of nature by establishing the existence of necessary (and strictly universal) empirical causal laws. Moreover, it is argued that we cannot really talk about the existence of causation in nature without also admitting the existence of particular causal laws because the very concept of causation entails the existence of empirical laws. Consequently, by proving the a priori validity of the Causal Principle, according to which every event has some cause, Kant proves also that every event in nature is subject to some particular causal laws.
C. **Guiding Questions**

As is clear from the brief description of the two most popular accounts of Kant’s conception of empirical laws, understanding what Kant establishes in the Second Analogy is crucial to solving Kant’s problem of empirical laws. In particular, it is crucial to determine whether the Second Analogy proves the existence of necessary (and strictly universal) particular causal laws because commentators’ disagreement on the status of the empirical laws partly stems from their disagreement on whether the Second Analogy guarantees the existence of particular empirical causal laws. Thus, one of the most important questions we need to address is: What does the Second Analogy establish with regard to the existence of particular causal laws?

While this question is logically distinct and independent from the question of what Kant aims to establish in the Second Analogy, due to the obscurity and complexity of Kant’s Second Analogy argument it seems necessary to take a step back and identify what Kant intends to establish. As we saw, different readings of the Second Analogy arise partly because scholars attribute different goals to Kant. While there is a general agreement that in the Second Analogy Kant aims to address ‘the Humean problem,’ commentators disagree on the particular nature of this problem, defending either that he aims to solve the Humean problem of causation or induction. So, the next question is: What is the nature of the Humean problem Kant responds in the Second Analogy?

Unless we identify the nature of the Humean problem Kant addresses in the Second Analogy we cannot conclusively determine what the argument establishes with regard to the status of empirical laws. It is not a coincidence that scholars usually frame the questions about Kant’s account of empirical laws by comparing it with Hume’s account of empirical laws. More specifically, they ask whether Kant agrees with Hume that empirical laws are merely contingent
empirical generalizations. In order to answer these questions, however, one needs to know the extent to which Kant reacts and influenced by Hume. That is why before we start closely examining the Second Analogy argument itself, it is important to get a clear picture of Kant’s relationship to Hume.

Accurately identifying the specific Humean problem also requires some prior knowledge about the characteristics of different skeptical problems Hume introduced in relation to causation. Without such philosophical background about the characteristics of Hume’s skeptical problems we cannot recognize the problem Kant aims to solve in the Second Analogy. Getting a clear picture of Hume’s skeptical problems by determining the particular metaphysical principles these problems undermine would provide us with valuable guidance regarding the steps Kant needs to take in order to solve them. Consequently, it would allow us to identify the particular problem(s) the Second Analogy addresses. This in turn would allow us to determine whether the Second Analogy argument needs to provide an *a priori* argument for the existence of necessary empirical laws in order to respond to the Humean problem. Before we move on to Kant’s conception of the Humean Problem, therefore, it is important to know the features of Hume’s skeptical problems of causation and induction.

So far, we established that understanding what Kant’s Second Analogy argument establishes plays an important role in understanding whether Kant maintains that empirical laws have some *a priori* grounding mere empirical inductive generalizations lack. Despite the significance of the Second Analogy, in order to solve Kant’s problem of empirical laws in a satisfactory manner we also need to be able to account for the apparent tension in Kant’s other writings. For instance, to demonstrate that Kant has a univocal account of empirical laws we
need to address the apparent conflict between Kant’s assertions in the *Prolegomena*, first *Critique* and the third *Critique*.

Having identified the main questions that need to be addressed for a comprehensive solution for Kant’s problem of empirical laws, I hope the relationship between the following four central themes of the dissertation is clear, namely (i) Kant’s Second Analogy argument, (ii) Kant’s conception of the Humean problem, (iii) Hume’s skeptical problems of causation and induction, and finally (iv) the coherence of Kant’s claims in different texts. While these themes seem to be independent from each other, as the above discussion clarifies they are closely related. That is, one cannot have an accurate picture of (i) unless one knows about (ii). Similarly, identifying (ii) requires some background knowledge on (iii). Finally, without addressing (iv) we cannot acquire a comprehensive account of Kant’s conception of empirical laws, neither can we arrive at a satisfactory solution to the problem in question. In what follows, I will describe the general structure of my treatment of Kant’s problem of empirical laws and present the chapter outline of this dissertation.

D. The Structure of the Dissertation

Having determined the central themes and the guiding questions of this project, let me now briefly describe the topic of each chapter. In the next chapter, namely in Chapter II: Kant’s Problem of Empirical Laws, I first motivate my project and explain why there is a need to further investigate Kant's account of empirical laws by pointing out the apparently incoherent philosophical claims Kant makes with regard to the nature of “laws” and “empirical judgments,” which problematizes the concept of “empirical laws.” I addition to the apparent tension in Kant’s philosophical commitments, I also point out the apparent conflict about empirical laws in Kant’s different works. After I clarify the nature of Kant’s problem of
empirical laws, I then focus on how commentators have approached this problem and present a detailed analysis of the two most popular responses to the problem in question. My analysis both clarifies the underlying assumptions made by the proponents of these positions and helps us determine the strategy one needs to follow in order have a comprehensive and accurate understanding of Kant’s conception of empirical laws. As will be clear, we cannot arrive at a complete account of Kant’s conception of empirical laws without first determining what Kant establishes in the Second Analogy, which in turn requires some background knowledge of Hume’s skeptical problems of causation and induction.

That is why in the third chapter, namely Chapter III: Hume’s Problems of Causation and Induction, I examine Hume’s skepticism about causation independently of how Kant understood Hume. Close analysis of the nature and the relationship between Hume’s skeptical problems of causation and induction will help us identify the metaphysical principle each problem undermines. As we shall see, Hume’s attack on our justification for the Causal Principle, namely that “every event has a cause” constitutes the “problem of causation.” His attack on the validity of the principle of the uniformity of nature, which grounds our inductive reasoning, on the other hand, constitutes the “problem of induction.” After I explain the nature of these problems and point out the principles they target, I argue that a satisfactory solution to the “problem of causation” requires an \textit{a priori} justification of the validity of the Causal Principle, while a compelling response to the “problem of induction” requires an \textit{a priori} demonstration of the uniformity of nature, i.e., proving that the course of nature remains the same in a way that future will conform to the past.

Having identified the metaphysical principles undermined by Hume’s skeptical problems of causation and induction, in Chapter IV: Kant’s Conception of ‘the Humean
Problem’, I turn my attention to Kant’s conception of the Humean problem and closely examine the texts where Kant refers to Hume and the Humean problem. As will be clear, Hume, according to Kant, focused primarily on the validity of a single metaphysical concept and principle, namely the concept of causation and the Causal Principle. While Kant appreciates Hume’s arguments against the apriority of the Causal Principle for demonstrating that the Causal Principle is ‘synthetic’, he disagrees with Hume’s conclusion that since it is synthetic, it must also be known *a posteriori*. As I argue, Kant’s main disagreement with Hume concerns the apriority of the Causal Principle. Thus, the Humean problem Kant aims to solve in the Second Analogy is the problem of causation as opposed to the problem of induction. In order to address this problem, Kant in the Second Analogy should provide an argument for the apriority of the Causal Principle alone. To put it another way, in order to solve the Humean problem Kant does not need to provide an *a priori* justification for the uniformity of nature.

Since the fourth chapter clarifies Kant’s conception of the Humean problem, in Chapter V: What Does the Second Analogy Establish?, we will be prepared to analyze how Kant argues for the *a priori* validity of this general metaphysical principle, namely the Causal Principle. Before I present my step-by-step reconstruction of the Second Analogy argument, however, I first describe Kant’s method of argumentation, which allows me to identify the premises and the conclusion of the argument. As my reconstruction of the argument shall show, Kant provides an *a priori* grounding for the Causal Principle, and thereby successfully addresses the problem of causation.

Since Kant formulates the Causal Principle slightly differently than Hume, however, the Second Analogy, as I shall argue, establishes more than the existence of causal relations in nature. More specifically, I agree with Michael Friedman that the Second Analogy guarantees
not only that every event has some cause, but also that all causal relations are subsumed under some particular causal laws. Contra Hume, then, we know the existence of empirical laws *a priori*, according to Kant. This, however, does not mean that we know individual causal laws *a priori*. While we know *a priori* that there are particular causal laws to be discovered, we discover empirical laws through inductive reasoning.

While the Second Analogy demonstrates that there are particular causal laws governing events in nature, it does not guarantee the repeatability of these laws. In order to be able to claim that nature is uniform in the sense that the future will resemble the past, however, we need to know that at least some of the causal laws are repeatable. Thus, the Second Analogy falls short of establishing the uniformity of nature, and thereby fails to address Hume’s problem of induction. In my alternative interpretation, therefore, the Second Analogy solves the problem of causation by proving the *a priori* validity of the Causal Principle, which entails the existence of law-governed causal relations. This, however, falls short of addressing Hume’s problem of induction. In conjunction with the previous chapter where the Humean problem is identified as the problem of causation, then, we can conclude that the Second Analogy argument serves Kant’s purposes. Consequently, a lack of *a priori* demonstration for the uniformity of nature in the Second Analogy does not entail a failure on Kant’s part.

After I offer my alternative reading of Kant’s Second Analogy, in Chapter VI: Resolution of Kant’s Problem of Empirical Laws, which is the final chapter of the dissertation, I move on to Kant’s description of empirical laws in the third *Critique*. This chapter addresses the criticism that Kant lacks a univocal account of empirical laws because he seems to propound different accounts of empirical laws in his different works. For instance, while in the first *Critique*, Kant argues that empirical laws are necessary and their necessity derives from the
faculty of understanding, in the third *Critique*, he appears to maintain that empirical laws are contingent and argue that the only kind of necessity that these contingent empirical rules can express is a function of our faculty of reflective judgment. Moreover, while in the first *Critique*, Kant seems to present a simple account of how we come to formulate empirical laws, in the third *Critique* he seems to provide a more complicated account which involves not only the faculties of sensibility and understanding, but also the faculty of reflective judgment.

In response to the aforementioned charge that Kant lacks a univocal account of empirical laws, I argue that what appears to be novel in the third *Critique* has already been discussed in different terms in the first. In other words, despite its apparent simplicity, Kant’s description of empirical laws in the first *Critique* is just as much complicated as his description in the third *Critique*. This chapter also explains how Kant’s assertions in the third *Critique* concerning the contingency of empirical laws are compatible with the passages in the first *Critique*, where he attributes “material necessity” to particular empirical causal laws. On my reading, Kant attributes two different kinds of necessity to empirical laws, namely “material necessity” and “regulative necessity.” While the former is a function of the understanding, and therefore derives from the relationship of empirical laws to *a priori* principles of the understanding, the latter is a work of the regulative use of reason (or reflective judgment) and arises due to the particular place empirical laws have in relation to more general empirical laws in a system. Moreover, while on the account Kant presents in the first *Critique*, empirical laws express a kind of necessity that merely inductive generalizations would lack, in the third *Critique* he admits that empirical laws might appear contingent from the point of view of the understanding simply because we might not be able to gain insight into their necessity.
CHAPTER II: KANT’S PROBLEM OF EMPIRICAL LAWS

A. Introduction

This chapter does two things. First, it identifies an important problem in Kant’s critical philosophy, namely the problem of empirical laws. Second, it explains the strategy one should adopt in order to solve this problem. The structure of the chapter is as follows: First, I point out the apparent philosophical and textual tensions with regard to Kant’s conception of empirical laws, which in turn illuminates the characteristics of what I call “Kant’s problem of empirical laws.” Having described the nature of this problem, I present a detailed analysis of the two most popular accounts of empirical laws in Kant scholarship and point out their main points of disagreement. Finally, I clarify the underlying reasons why scholars disagree on the status of empirical laws. As our discussion clarifies, in order to arrive at a satisfactory solution to Kant’s problem of empirical laws, we need to answer the following questions: What does the Second Analogy establish regarding the existence of empirical laws? What is the nature of the Humean problem Kant addresses in the Second Analogy? What does one need to establish in order to address Hume’s skeptical problems of causation and induction? And finally, I explain how we can reconcile Kant’s seemingly conflicting descriptions of empirical laws in the first and the third Critiques.

B. The Nature of Kant’s Problem of Empirical Laws

(i) Tension in Kant’s philosophical commitments

In the Jäsche logic lectures, Kant distinguishes two kinds of rules, namely necessary rules, which he identifies as “laws,” and contingent rules (JL, 9:12). Again in the first Critique, Kant writes, “Rules, so far as they are objective (and thus necessarily pertain to the cognition of objects) are called laws” (my emphasis, A126) So, Kant considers necessity as a distinguishing
feature of *laws*. Contingent rules, on the other hand, are mere empirical generalizations derived from our particular experience through induction and they possess “empirical” or “comparative universality” (A91/B124), as opposed to “strict universality” (A31/B47). Kant defines “comparative” or “empirical universality” as “an arbitrary increase in validity from that which holds in most cases to that which holds in all.” (B4) Given this definition, Kant asserts that the proposition “All bodies are heavy” would be comparatively universal because it refers to all bodies that have been observed so far. Nonetheless, it is possible to observe an exception, i.e., a weightless body. On the other hand, if a judgment is “strictly universal,” then it is an *a priori* judgment and the judgment expresses that there cannot be any exception. For instance, the proposition “All bodies are extended” is a strictly universal because it refers to all observable bodies, without any exception (B4). Thus, Kant is quite explicit that *empirical* rules are contingent and merely “comparatively universal,” while *laws* are necessary (or necessarily pertain to cognition) (A9/B13). In the *Vienna Logic Lectures*, Kant emphasizes the same point more precisely: “experience teaches us nothing but contingent things” (792). Similarly, in the *Bloomberg Logic Lectures* Kant states that, “Experience does not permit any [strictly] universal judgments at all, except of possibility. Experience simply cannot teach me […] that all men must die, e.g., but only that all men who have previously lived have died” (§203-204, 238).

Given Kant's commitments to the necessity of *laws* and the contingency of *empirical* rules, it seems that the very conception of “empirical laws” is an oxymoron in the Kantian framework because empirical laws *qua* laws must be necessary and yet *qua* empirical must be contingent. Hence, the following question arises: Does Kant have a
coherent account of empirical laws? In order to answer this question let us examine how he describes the nature of empirical laws.

(ii) **Tension in Kant’s writings**

To determine whether Kant has a coherent conception of empirical laws we need to focus on the two apparently problematic features of empirical laws, namely their lawfulness and empirical origin. To get a clear picture of their lawfulness we will focus on how Kant distinguishes empirical laws from other kinds of laws, such as the *a priori* laws of understanding, and examine how Kant describes the relationship between these two kinds of laws. To understand their empirical nature, on the other hand, we will analyze the role experience plays in our knowledge of empirical laws.

Kant explains the relationship between the empirical laws and the *a priori* laws of understanding as follows:

> Although we learn many laws through experience, these are only particular determinations of yet higher laws, the highest of which (under which all others stand) come from the understanding itself *a priori*, and are not borrowed from experience, but rather must provide the appearances with their lawfulness and by that very means make experience possible. (A126)

In other words, even though empirical laws are particular determinations (or specifications) of the *a priori* laws of understanding, and thereby stand under them, Kant argues that we learn about empirical laws only through experience. At A216/B263, he repeats this point more explicitly as he writes, “empirical laws can only obtain and be found by means of experience.” In other words, even though empirical laws are mere specifications of the *a priori* laws of understanding they cannot be derived purely deductively from those *a priori* principles. We need experience in order to learn about (or to discover) them. As Kant writes:
To be sure, empirical laws, as such, can by no means derive their origin from the pure understanding, just as the immeasurable manifoldness of the appearances cannot be adequately conceived through the pure form of sensible intuition. But all empirical laws are only particular determinations of the pure laws of the understanding, under which and in accordance with whose norm they are first possible, and the appearances assume a lawful form, just as, regardless of the variety of their empirical form, all appearances must nevertheless always be in accord with the pure form of sensibility. (A127-28)

Once again, Kant refers to empirical laws as “particular determinations of the a priori laws of the understanding.” While he claims that these a priori principles give a lawful form to our experience, as Kant explains, they do not sufficiently determine nature empirically. In other words, even though the a priori principles of understanding guarantee that experience takes a lawful form or guarantees what Kant calls “formal unity of nature” (A127), they do not guarantee that we will also be able to deduce empirical laws simply by analyzing those a priori principles. We need experience to learn about the particular empirical determination of those a priori laws.

While it is clear that we cannot know empirical laws without the help of experience, there is still an ambiguity in the exact role experience plays. For instance, it is not clear whether we need experience to know that there are empirical laws in nature or whether Kant makes a weaker claim and simply suggests that we need experience to find out about the characteristics of individual empirical laws. If it is the former, then Kant claims that the only way we can know that there are particular causal laws in nature is by discovering them through experience.

If we, however, discover the existence of empirical laws through experience it seems that empirical laws for Kant have the same status that mere contingent empirical generalizations have for Hume. According to Kant, “experience never gives its judgments
true or strict but only assumed and comparative universality (through induction), so properly it must be said: as far as we have yet perceived, there is no exception to this or that rule” (B3-4). In other words, empirical rules, for Kant, can be at most comparatively universal inductive generalizations. Consequently, if Kant holds that we know about empirical laws only through experience, he is in agreement with Hume that empirical laws are mere inductive generalizations that are merely contingently true or as Kant puts it only comparatively universal. Note that if this reading is true, empirical laws, for Kant, are not genuine laws because they do not possess the essential feature that distinguishes laws from rules, namely necessity.

There are passages that appear to support this reading of empirical laws. In the first Critique, for instance, Kant seems to admit that particular empirical determinations of the Causal Principle, namely, particular empirical causal laws are contingent. As Kant writes, “He [Hume] [...] falsely inferred from the contingency of our determination in accordance with the law the contingency of the law itself” (A766/B794). It is clear that Kant criticizes Hume for falsely inferring the contingency of the Causal Principle from the contingency of its particular determinations, namely empirical laws. It seems that Kant disagrees with Hume, only on the status of the Causal Principle, not the empirical laws.

Kant’s assertions in the third Critique also suggest that empirical laws, for Kant, are merely contingent inductive generalizations. In the following passage, for instance, Kant asserts that appear to be contingent:

[T]here is such a manifold of forms in nature, as it were so many modifications of the universal transcendental concepts of nature that are left undetermined by those laws that the pure understanding gives a priori, since these pertain only to the possibility of a nature (as object of the
senses) in general, that there must nevertheless also be laws for it which, as empirical, may seem to be contingent in accordance with the insight of our understanding. (my emphasis, 5:179-80)

Here, Kant once again admits that the a priori laws of the understanding do not completely determine their particular instantiations. The a priori laws of understanding gives form to our experience, and thereby determine our experience of nature purely formally. Since the matter of our experience, namely sensation is given to us and is not a contribution of our faculties the former falls short of determining nature empirically. In other words, the formal unity of experience does not guarantee the existence of empirical uniformities because so many particular empirical modifications of the a priori laws are left undetermined. That is why we need to appeal to experience and inductive procedures in order to discover empirical laws and fail to grasp their necessity.

In light of these passages, one might conclude that Kant is pretty much in agreement with Hume on the status of empirical laws. Both of them seem to maintain that we learn about empirical laws through experience, which can at most give us contingent empirical generalizations. Such conclusion, however, appears to be in conflict with some other passages, where Kant insists that empirical laws must carry some kind of necessity. As he writes:

Even laws of nature, if they are considered as principles of the empirical use of the understanding, at the same time carry with them an expression of necessity, thus at least the presumption of determination by grounds that are a priori and valid prior to all experience. (A159/B189, my emphasis)

It is clear that even empirical laws express a kind of necessity that derives from the faculty of understanding. In other words, Kant is not so quick to exclude empirical laws from the category of laws or necessary rules. In fact, in the Postulates of Empirical Thought, in particular his discussion of the third postulate focuses on the conditions for
the application of the modal category of necessity. There, Kant introduces a kind of necessity, namely “material necessity” that derives from our faculty of understanding. As he writes:

[A]s far as the third postulate is concerned, it pertains to material necessity in existence, not the merely formal and logical necessity in the connection of concepts. [...] Now there is no existence that could be cognized as necessary under the condition of other given appearances except the existence of effects from given causes in accordance with laws of causality. Thus it is not the existence of things (substances) but of their state of which alone we can cognize the necessity, and moreover only from other states, which are given in perception, in accordance with empirical laws of causality. (my emphasis, A226-27/B279-80)

As is clear, “material necessity” is a kind of necessity that expresses the connection between causes and their effects. That is why Kant uses “material” and “causal necessity” interchangeably. This necessity, according to Kant, express the necessary connection by which causes are connected to their effects in accordance with the “laws of causality.” Moreover, it is the only kind of necessity we can cognize (or know) with regard to existing objects. Note that the faculty of understanding is capable of providing a kind of necessity, which is distinct from the “transcendental necessity” of the a priori laws of understanding and the “analytic (or conceptual) necessity” of the analytic (or conceptual) truths.

While in the first Critique, Kant accounts for the lawfulness of empirical laws by attributing them material necessity, which derives from the understanding, in the published Introduction of the third Critique, he holds that empirical laws must be regarded as necessary due to an a priori principle of reflective judgment, which orders empirical laws and unifies them in a system of laws:

[T]here must nevertheless also be laws […] which, as empirical, may seem to be contingent in accordance with the insight of our understanding, but
which, if they are to be called laws (as is also required by the concept of a nature), must be regarded as necessary on a principle of the unity of the manifold, even if that principle is unknown to us. (5:179-80, italics mine)

In this passage, Kant argues that even though we do not have insight into the necessity of particular casual laws, they must be viewed as necessary due to “a principle of the unity of manifold”, which as he explains later is a principle that is responsible for the systematic subordination of particular casual laws under one another. Kant later identifies this principle as one of the a priori principles of reflective judgment, namely the “principle of purposiveness of nature.” As he writes, “The purposiveness of nature is thus a special a priori concept that has its origin strictly in the reflecting power of judgment. For we cannot ascribe to the products of nature anything like a relation of nature in them to ends, but can only use this concept in order to reflect on the connection of appearances in nature that are given in accordance with empirical laws” (5:181). Empirical laws, then, express a kind of necessity that derives from the reflective judgment, a faculty that orders empirical laws in a systematic way under more general empirical laws (5:179-80).

In the third Critique, therefore, Kant seems to present a very different account of empirical laws. Contra the material necessity introduced in the first Critique, which derives from the faculty of understanding, the necessity expressed by empirical laws in the third Critique is a function of reflective judgment. Once again, Kant’s assertions regarding the necessity of empirical laws appear to be in conflict with each other. On the one hand, he claims that understanding is capable of providing what he calls material (or causal) necessity to empirical laws, on the other hand, he argues that empirical laws may seem to be contingent in relation to the same faculty. Moreover, while in the first Critique the necessity of empirical laws derives from the faculty of understanding, in the
third Critique we learn that it is a product of the reflective judgment (or regulative use of reason).

So far, we saw that Kant’s philosophical commitments regarding the necessity of laws and the contingency of empirical rules challenges the possibility of a coherent conception of empirical laws in the Kantian framework. Unfortunately, Kant’s writings on the status of empirical laws do not provide us much help either. What I call “Kant’s problem of empirical laws,” therefore, is a problem concerning the coherence of Kant's claims that empirical laws as laws express a kind of necessity, and as empirical they are contingent.

Given the ambiguity in Kant’s writings, it is not a surprise that Kant scholarship is widely divided with regard to the nature and status of empirical laws. While some scholars try to present a coherent reading of the aforementioned passages and claims, others simply deny that Kant has coherent account of empirical laws. For instance, in his article “Kant's Conception of Empirical Law,” Paul Guyer points out the drastic change in Kant’s description of empirical laws in the first and the third Critiques. According to Guyer, while in the first Critique Kant presents a relatively simple account of empirical laws, according to which empirical laws are products of the synthesis of empirical intuition of sensibility and the a priori principles of understanding alone, in the Critique of Judgment, Kant presents a more complicated picture of empirical laws, which suggests that the regulative rules of reason play a necessary role in our discovery of empirical laws as well as the faculties of understanding and sensibility (p. 221-42). On Guyer’s reading,

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this drastic change in Kant’s conception of empirical laws shows that he lacks a univocal account of empirical laws.

Contra Guyer, I believe we can read those apparently inconsistent claims in coherent manner, and consequently solve Kant’s problem of empirical laws. Before I present how we can resolve this problem, however, let us closely examine the two popular readings offered in Kant scholarship. In the next section, therefore, we will closely analyze two popular accounts of Kant’s conception of empirical laws and examine how these accounts deal with the problem of empirical laws.

C. Two Popular Accounts of Kant’s Conception of Empirical Laws

There are two main positions on Kant’s account of empirical laws, while some scholars such as Lewis White Beck, Gerd Buchdahl and Henry Allison argue that empirical laws, for Kant, are mere empirical contingent generalizations, which are at most comparatively universal, others such as Michael Friedman and Robert Hanna argue that despite their empirical origin, empirical laws are necessary and strictly universal rules. Let us closely examine these opposite views in order to determine their main points of disagreement and the underlying reasons for such disagreement.

(i) Gerd Buchdahl’s account

Gerd Buchdahl, among others, argues that Kant is mostly in agreement with Hume’s account of empirical laws. According to Buchdahl, Kant’s main disagreement with Hume rather concerns the apriority of the Causal Principle. The following passage in the Second Analogy, supports Buchdahl’s reading:

To be sure, it seems as if this [the Second Analogy argument] contradicts everything that has always been said about the course of the use of our understanding, according to which it is only through the perception and comparison of sequences of many occurrences on preceding appearances
that we are led to discover a rule, in accordance with which certain occurrences always follow certain appearances, and are thereby first prompted to form the concept of cause. On such a footing this concept would be merely empirical, and the rule that it supplies, that everything that happens has a cause, would be just as contingent as the experience itself: its universality and necessity would then be merely feigned, and would have no true universal validity, since they would not be grounded \textit{a priori} but only on induction. (A195-96/B240-41)

While Kant disagrees with Hume that the Causal Principle is an inductive empirical generalization, on Buchdahl’s reading, both Hume and Kant agree on the status of empirical laws, such as the universal law of gravitation.

Contrary to what is implied by the majority of commentators, Kant [...] regards the law of gravitation as altogether empirical. This he cites explicitly (MF, p. 534), emphasizing that we are not entitled ‘through \textit{a priori} conjectures to hazard a law of attractive ...force, [but that] universal attraction (as a cause of gravity), together with its law, must be inferred from the data of experience’ [...] words which almost reproduce those of Newton. (1992, p. 257)

Empirical laws, such as the law of universal gravitation, on Buchdahl’s reading, are contingent laws that we derive from experience. Buchdahl supports his reading of Kant’s conception of empirical laws with what is usually called the “weak reading” of the Second Analogy argument.\(^2\)

On Buchdahl’s weak reading, to which I prefer to call the “modest reading” of the Second Analogy, Kant addresses the Humean problem of causation, which is a problem concerning the justification of only the Causal Principle, generally referred to as “every event has some cause”. As we shall see, this formulation of the Causal Principle is closer to Hume’s formulation of than Kant’s because Kant’s formulation makes reference to \textit{a

\(^2\) Gerd Buchdahl and Henry Allison call this the “weak reading” of the Second Analogy. For their description of the weak and the strong readings of the Second Analogy, see Buchdahl’s “Causality, Causal Laws and Scientific Theory in the Philosophy of Kant” (especially, pp. 190-200) and Allison’s \textit{Kant’s Transcendental Idealism: An Interpretation and Defense}, (especially p. 256) and \textit{Idealism and Freedom} (especially, p. 81).
rule” which will play an important role in our interpretation of the Second Analogy argument. Kant’s argument for the apriority of the general Causal Principle, according to Buchdahl, does not provide an *a priori* proof that we can find its particular empirical determinations. Consequently, the Causal Principle guarantees neither the existence nor the necessity of empirical laws.

Buchdahl’s modest reading of the Second Analogy draws on the distinction between the different levels in which Kant’s arguments for the existence of causality and lawlikeness (or conformity to laws) [*Gesetzmassigkeit*] operate, namely, the *transcendental* (or *a priori*) and the *empirical* levels (1992, p. 223). According to Buchdahl, there is a gap between the transcendental and empirical levels of lawlikeness. Hence, Kant’s argument for the existence of causality and lawlikeness at the transcendental level does not necessarily entail the existence of causality and lawlikeness at the empirical level (1992, p. 225). Since Kant’s Second Analogy argument operates at the transcendental level, on Buchdal’s modest reading, it guarantees neither that there are empirical causal laws, nor that these empirical laws are really “lawlike” or necessary. As Buchdahl puts it, “the general [causal] principle cannot be intended to furnish a justification for the assumption even of [empirical] lawlikeness in general, (let alone the existence of special laws)” (1965, p. 200). He repeats this point later as follows: “when Kant says that the analogies give us causality, […] we must *not* take it that the general causal principle provides a justificational basis for such [particular causal] laws, or for their ‘lawlikeness in general’” (my emphasis, 1965, p. 207). That is, Kant’s argument for the apriority of the general Causal Principle, on Buchdahl’s reading, does not provide an *a priori* proof for the existence of particular causal laws.
Following Buchdahl, Henry Allison also argues that Kant’s transcendental arguments in the analogies do not prove that there are empirical laws. As Allison explains: “[T]he Analogies [...] perform (and are intended to perform) only the minimal transcendental function of securing an objective temporal order of contingent occurrences, while the actual projection of an empirically lawlike order of nature is seen as the work of reason or reflective judgment. [...] Expressed in the language of Lewis White Beck, who opts for a similar reading, this amounts to the claim that Kant's concern [in the Second Analogy] is to reply to Hume's challenge to the “every event some cause” principle of the *Treatise*, as opposed to the “same-cause same-effect” principle, which was the target in the *Enquiry*” (1996, p.80).

Instead of providing an *a priori* justification for the existence of particular empirical causal laws, the Second Analogy argument, on Buchdahl’s account, provides us merely a “guide-line” with necessary conceptual and linguistic tools for discovering those empirical laws. As he explains in his article “Causality, Causal Laws and Scientific Theory,”

[W]e have shown that the statement of the principle of causality can be proved *a priori*, in the sense that the conception of an objective world entails the thought of the members of that world, *regarded as appearances*, being subject to a rule. Let us then use this principle, not considered as a *support* for the specifications of the particular rules which experience may come to discover, but as guide-line for the search of principles; where having this guide-line does not mean having guarantee that any putative principle is a law, but rather, that it gives us the *language* in terms of which to carry on our procedure. (1965, p. 197)

To put it another way, the Second Analogy proves the *a priori* validity of the Causal Principle by showing that we cannot think of objects of experience unless we assume that our representations of objects are subject to “a rule.” And this rule, on the modest
reading, is none other than the Causal Principle, which is a transcendental principle of
understanding.

Due to the gap between the \textit{a priori} transcendental laws of understanding and its
particular empirical determinations, which are formulated by reason, Kant’s Second
Analogy argument for the validity of the Causal Principle guarantees neither that the it
has particular determinations, i.e., particular empirical causal laws, nor that we will be
able to discover them.

The reason why Buchdahl thinks that there is a gap between the transcendental
and the empirical levels is that, according to Buchdahl, Kant assigns very different and
mutually exclusive roles to the faculties of understanding and reason. In the first \textit{Critique},
Kant describes reason as the faculty that regulates the products of our faculty of
understanding. Kant describes the difference between these two faculties roughly as
follows: \textit{a priori} rules (and concepts) of understanding constitute our experience of
objects, while the \textit{a priori} principles (and ideas) of reason guide our empirical or
scientific inquiry (A671/B699). In the third \textit{Critique}, Kant introduces the faculty of
judgment, which he defines as “the faculty for thinking of the particular as contained
under the universal” (5:179). He argues further that the faculty of judgment has both
determining and reflective use: “If the universal (the rule the principle, the law) is given,
then the power of judgment, which subsumes the particular under it (even when, as a
transcendental power of judgment, it provides the conditions \textit{a priori} in accordance with
which alone anything can be subsumed under that universal), is determining. If, however,
only the particular is given, for which the universal is to be found, then the power of
judgment is merely reflecting” (5:179). Note that it is the reflecting judgment that enables
us to make inductive inferences, i.e., reason from our experience of objects to a general rule about them. Since reflective judgment seems to play the role of reason, Kant scholars usually identify the regulative employment of reason described in the first *Critique* with the reflective judgment described in the third *Critique*.

According to Buchdahl, while *understanding* (through its *a priori* transcendental principles) constitutes human experience, *reason* (through its *a priori* regulative principles) orders our experience in a systematic way, and by so doing it enables us to empirically discover particular causal laws. For Buchdahl, then, the empirical lawfulness is a self-imposed task of our faculty of reason (an objective that reason strives to achieve) (1965, p. 201). In this respect, reason operates at the empirical level by guiding our empirical or scientific inquiry (1965, p. 204). That is why Buchdahl maintains that the Second Analogy argument does not guarantee the existence of particular causal principles. On his modest reading, Kant agrees with Hume that particular empirical causal laws are contingent generalizations derived inductively from experience. Like all empirical inductive rules, particular causal laws, on Buchdahl’s reading, are merely empirical contingent generalizations that we come to formulate through the *a priori* regulative principles of reason, as opposed to understanding.³

Even though particular empirical laws are contingent from the point of view of our faculty of understanding, Buchdahl does not deny that these rules can express a kind of necessity. When they are ordered under more general empirical laws in a systematic way, empirical laws express a kind of necessity due to their place in a system of

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³ L.W. Beck and Graham Bird agree with Buchdahl that while Kant disagrees with Hume’s account of the Causal Principle, he agrees with Hume on the contingency of the particular empirical laws. See especially, Beck’s “A Prussian Hume and a Scottish Kant” (1978, p. 119) and Bird’s *Kant’s Theory of Knowledge* (1973, pp. 149-167).
empirical laws. More specifically, when empirical laws are considered in a system of
laws, we become more certain of their truth, and consequently attribute to them a kind of
necessity. That is, by putting our empirical judgments in a systematic order, reason with
its regulative principles enables us to attribute what Buchdahl calls “lawlike necessity” to
empirical generalizations.

Since empirical laws express necessity only in the systematic unity of laws, and
because such a system is secured only through the regulative employment of reason,
Buchdahl refers to this kind of necessity as “regulative necessity” (1965, p. 204). Note
that this kind of necessity is not grounded in the understanding, and consequently it is not
established in the Analogies of Experience. As Buchdahl writes, “[t]he ground of this
necessity can therefore not be involved in the argument of the analogies of experience,”
where Kant is concerned with the understanding’s role in experience (1965, p. 204). On
Buchdahl’s modest reading, then, not only the existence, but also the necessity (or
lawlikeness) of particular empirical causal laws depend on the activity of reason:
“without the activity of reason there would be no systematic connection, and hence no
sense in ascribing to the special contingent rules of nature any lawlike necessity” (1965,

Once again, Allison agrees with Buchdahl that understanding has nothing to do
with the necessity of empirical laws. As Allison puts it, “the necessity of empirical laws
is entirely a function of their place in a systematic structure of such laws, while this
structure, in turn, is seen as a regulative demand of reflective judgment rather than a
constitutive requirements of the understanding (1996, p. 90). Note that on the modest
reading of the Second Analogy, Kant aims to address the Humean problem of causation,
which requires an *a priori* validity of the Causal Principle. By demonstrating that all appearances must be subject to a rule of understanding, namely, the general Causal Principle, Kant successfully attains his objective. Thus, on the modest reading, there is no reason or need for the Second Analogy argument to also establish the existence and the necessity of particular empirical causal laws. That is why the fact that Kant’s Second Analogy argument is mute about the existence and necessity of particular empirical causal laws does not constitute a problem for him neither does it weaken his response to Hume.

(ii) Michael Friedman and Graciela De Pierris’ account

Contra Buchdahl, Michael Friedman and Graciela De Pierris argue that empirical laws carry a kind of necessity that mere inductive generalizations lack: “it is by no means the case that […] particular causal laws are grounded solely on induction and, accordingly, that the necessity we attribute to particular causal connections is merely subjective” (*SEP*). In order to support their account of empirical laws, Friedman and De Pierris offer what is usually referred to as the strong reading of the Second Analogy. In this section, we will briefly examine the main arguments for the strong reading of the Second Analogy.

As we saw in the previous section, one of the reasons why Buchdahl denies that the Second Analogy argument proves the existence of particular empirical laws is because he thinks that the analogies are concerned exclusively with the *a priori* (transcendental) contributions of our faculty of understanding, while formulating empirical causal laws is the business of the faculty of reason. Recall also that, on Buchdahl’s reading, even though they act together to constitute experience, they play
distinct and mutually exclusive roles and operate at strictly different levels, namely the transcendental and the empirical. That is why he concludes that Kant’s Second Analogy argument for the existence of causality and lawlikeness at the transcendental level does not guarantee the existence of causality and lawlikeness at the empirical level.

In his influential article “Regulative and Constitutive Principles,” Friedman argues against the assumption that understanding and reason play mutually exclusive roles and attempts to close the gap between the *a priori* constitutive principles of understanding and the *a priori* regulative principles of reason. While Friedman agrees with Buchdahl that the regulative principles of reason (or reflective judgment) satisfy the demands of the understanding by further determining the *a priori* laws of understanding in the empirical realm, contra Buchdahl, he denies the assumption that understanding plays no role whatsoever in the realization of any of the empirical concepts and empirical causal laws (1992c, p. 90). In fact, the most general empirical concept and empirical law, namely the concept of matter and the empirical law of universal gravitation, according to Friedman, are the mutual products of understanding and reason (1992c, p. 87).

While Friedman concedes that more specific empirical concepts and laws are determined by reason alone, he nevertheless presents a detailed account of the law of universal gravitation, showing that it is a unique empirical realization of the *a priori* principles of understanding. As Friedman puts it, “The constitutive principles of understanding extend to the very highest genus and very highest law of empirical natural science: the empirical concept of matter and the law of universal gravitation. All the rest of the empirical natural science remains solely within the regulative purview of reason and reflective judgment” (1992c, p. 90).
Contra the modest reading, then, our faculties of understanding and reason do not always play mutually exclusive roles. As Friedman argues, we can know that at least one empirical law, namely the law of universal gravitation, is the product of both reason and understanding. Consequently, the fact that the analogies are concerned with the *a priori* contributions of the understanding does not rule out that they can guarantee the empirical lawfulness of nature.

To further support their thesis that the faculty of understanding is indeed capable of guaranteeing the existence of particular empirical laws Friedman and De Pierris appeal to Kant’s Second Analogy argument. As they point out that Kant, in the Second Analogy repeatedly makes reference to “a rule.” On their reading, by “a rule” Kant means “a particular empirical causal law,” as opposed to the Causal Principle itself. As they put it:

Kant maintains that, when one event follows another in virtue of a causal relation, it must always follow ‘in accordance with a rule’ (A193/B238). Moreover, the ‘rule’ to which Kant is here referring is not the general causal principle, but rather a particular law connecting a given cause to a given effect which is itself strictly universal and necessary (A193/B238–239): ‘In accordance with such a rule, there must thus lie in that which precedes an event as such the condition for a rule according to which this event follows always and necessarily.’ Kant insists on this point throughout the Second Analogy. *(SEP)*

Similarly, in “Causal Laws and the Foundations of Natural Science,” Friedman interprets Kant’s use of “a rule” as “a particular casual law.” After he quotes a passage from the Second Analogy (A198/B243–4), where Kant discusses the rule-governed causal relations, Friedman asserts that, “To say that B has a cause A is therefore, at the same time, to say that B is related to A by a uniformity or causal law; and it thereby follows that the universal causal principle must assert the existence of particular causal laws or uniformities as well” (1992a, p. 171).
On the strong reading, therefore, since the Causal Principle makes reference to particular causal laws, if Kant’s Second Analogy argument for the validity of the Causal Principle is successful, it also demonstrates the existence of its particular determinations. In other words, since the Causal Principle entails the existence of particular causal laws, the Second Analogy shows both that every event is causally related to some other event and that each causal relation is subject to some particular causal law.

In fact, Friedman thinks that the very concept of causation, for Kant, entails the existence of particular causal laws. More precisely, the concept of causation, as Friedman argues, entails the existence of a necessary connection between events and this necessary connection must occur in accordance with a strictly universal law (1992a, p. 162-3). And in support of this point, he quotes the following passage from section 13 of the first Critique:

For this concept [of causation] positively requires that something A be such that something else B follow from it necessarily and in accordance with an absolutely universal rule. […] Strict universality of the rule is certainly not a property of empirical rules, which, through induction, can possess nothing but comparative universality, i.e., extended utility. (A91-2/B123-4)

According to Friedman, this strictly universal rule, once again, is a particular causal law and in conjunction with Kant’s thesis that experience can never give its judgments necessity and strictly universality (B3-4), Friedman infers that “[t]o say that event A causes event B is to say, first, that there is a universal rule or law of the form: Events of type A are followed by events of type B” (1992a, p. 163). For Friedman, “the causal relation is understood in terms of strictly universal causal laws, which latter, in turn, are characterized necessary” (1992a, p. 163-4). That is why Friedman maintains that Kant’s conception of causation entails the existence of necessary and strictly universal causal
laws and Kant’s task is to prove that this conception is applicable to experience by demonstrating that there are such necessary causal laws (1992a, p. 164).

Since Kant argues for the apriority of the Causal Principle by demonstrating that it is a necessary precondition for the possibility of experience, one might wonder whether the strong reading entails that knowing particular empirical casual laws is a necessary precondition for the possibility of experience. According to Henry Allison, Friedman holds such an “epistemological thesis,” according to which the “cognitive function supposedly performed by the causal principle can be accomplished only by means of an explicit appeal to such [particular empirical causal] laws” (1996, p. 86). To put another way, Friedman’s view, according to Allison, cannot be right because it implies the apparently implausible view that we cannot have experience of events unless we know their causes. As Allison writes,

Contrary to what Friedman seems to assume, the Second Analogy does not claim that we must be able to provide the causal ground for an event before we are able to ascertain its objectivity; it claims instead merely that insofar as we experience (or take ourselves to experience) an event, we are constrained to presuppose that it has a cause. This licenses us to look for causal laws, but it hardly guarantees that we shall find them. (1996, p. 87).

While Friedman does not maintain the “epistemological thesis,” Paul Guyer certainly does. According to Guyer, the very possibility of recognizing events presupposes that we know the particular causal law to which those events are subject. As he puts it in his discussion of the Second Analogy: “Kant's theory is precisely that it is only if we are in possession of causal laws which dictate that in the relevant circumstances – that is, not in general, but in the particular circumstances of wind, tide,

setting of the sails, and so forth, which are assumed to obtain – the ship could only sail downstream that we actually have sufficient evidence to interpret our representations of it to mean that it is sailing downstream” (2006, p. 252). In other words, according to Guyer, we can recognize events only if we know the empirical laws that govern those events. That is, empirical laws, for Guyer, are “epistemological preconditions” for our knowledge of events (2006, p. 252). Allison criticizes such epistemological thesis as follows: “is it really the case that there can be no “objective experience” of water freezing apart from our knowledge of the causal conditions of this change? Or, alternatively, would we deny that the growth of a living organism is a case of an objective succession of states on the grounds that it cannot, according to Kant, be explicated in terms of mechanistic laws?” (1996, p. 86-7).

While Friedman explicitly argues that in the Second Analogy Kant proves the existence of particular empirical casual laws, he does not claim that we can know what those laws are. Friedman explicitly acknowledges that we discover the nature of individual particular casual laws empirically (1992a, p. 165-66). The strong reading rather endorses the view that even while we cannot know a priori what those empirical laws are, we can know a priori that they exist. Hence, Allison’s criticism of Friedman on this point is misdirected.

Even though Friedman does not argue for the “epistemological thesis”, as we saw he certainly defends the weaker “conceptual thesis,” according to which the concept of causality entails the existence of particular causal laws. In fact, the main problem with

5. See also Allison’s critique of Guyer’s version of the “epistemological thesis,” in his Kant’s Transcendental Idealism, (p. 256-57).
6. I adopt Henry Allison’s terminology in naming these views as “conceptual” and “epistemological” theses.
Buchdahl’s modest reading of the Second Analogy, according to Friedman, is that it fails to recognize this conceptual relationship between causation and particular causal laws (1992c, p. 77). For this conceptual entailment, claiming that events are causally connected is equivalent to claiming that they are subject to particular causal laws, according to Friedman. Hence, even if one attributes to the Second Analogy the modest objective of proving the validity of the Causal Principle to Kant’s Second Analogy argument, it still seems that the argument, if sound, guarantees the existence of particular causal laws (1992a, p. 171).

So far, we examined three different arguments for the view that Kant in the Second Analogy establishes the existence of particular empirical causal laws, which were based on (i) the mutual roles that the faculties of understanding and reason can play, (ii) a particular interpretation of Kant’s reference to “a rule,” and finally (iii) the conceptual relationship between the Causal Principle and particular causal laws.

On the strong reading, the Second Analogy argument guarantees not only the existence, but also the necessity of particular empirical causal laws.\(^7\) Friedman is not alone in attributing a kind of necessity to individual particular causal laws. Robert Hanna agrees with Friedman that individual empirical laws carry, what he calls, “material necessity” or “dynamic necessity.” Hanna, like Friedman, argues that this kind of necessity is most clear in the third postulate of empirical thought of the first *Critique*. On Hanna’s reading, empirical laws carry material necessity because they are true in every possible world whose material conditions are sufficiently similar to our own world.

The fact that effects must follow their causes necessarily and in accordance with a law, Friedman argues, suggests that the Causal Principle also guarantees the necessity of

\(^7\) For further details of his account see his book *Kant, Science and Human Nature*, especially, pp. 183-84.
particular causal laws: “if the universal causal principle asserts the existence of particular causal laws or uniformities, it must also assert their necessity” (1992a, p. 171) By arguing that individual particular causal laws are necessary, the strong reading situates Kant in opposition to Hume when it comes to the status of both the Causal Principle and particular causal laws. Contra Hume, who considers individual particular causal laws to be mere contingent generalizations, on the strong reading, the particular causal laws are grounded in the a priori transcendental laws of understanding, which in turn is a proof that they cannot be obtained or derived solely empirically through induction (1992a, p. 172). In this regard, empirical causal laws, on the strong reading, carry a kind of necessity (and strict universality) that mere inductive generalizations lack. As Friedman and De Pierris write:

The Second Analogy is [...] committed to the necessity and strict universality of particular causal laws. If the general causal principle […] is true, then, according to Kant, there must also be particular causal laws […], which are themselves strictly universal and necessary. (SEP)

Contra the modest reading, the necessity of particular causal laws, to which Friedman refers to as “empirical necessity,” is not a function of reason, but rather derives from the understanding:

Empirical necessity can derive from nowhere else than a priori grounding in the principles of understanding […] The task of reflective judgment is not somehow to provide a kind of necessity that the understanding itself cannot provide, but rather to systematize the potentially infinite multiplicity of empirical laws under more and more general empirical laws so as to approximate to the a priori necessity issuing from the understanding and from the understanding alone. (1992a, p. 190)

It is clear that the empirical necessity of the particular causal laws, according to Friedman, derives from the understanding alone and it is merely an approximation of the kind of necessity that a priori laws of understanding possess (1992a, p. 190). According
to Friedman, Kant explains the nature of this kind of necessity in the Postulates of Empirical Thought, in particular, in his discussion of the third postulate (1992a, p. 179-80).

In order to account for the necessity of empirical laws without contradicting Kant's thesis that necessity is a secure indication of apriority, Friedman argues that empirical laws are *a priori* in a derivative sense. Empirical laws, he claims, are more than mere contingent generalizations because they are subsumed under the *a priori* transcendental laws of understanding. Nonetheless, he admits that empirical laws do not carry the necessity of absolutely *a priori* transcendental laws. Unlike the *a priori* transcendental laws, which are independent of all experience, empirical laws cannot be discovered without the help of experience. In that respect, empirical laws of nature are situated between transcendental laws of understanding and mere inductive generalizations. As Friedman explains, empirical laws are the products of the synthesis of the *a priori* categories of the understanding and inductive empirical rules. He argues that empirical laws therefore have some kind of a mixed status:

> [P]articular causal laws, for Kant, have a peculiar kind of mixed status: They result from a combination of inductively observed regularities or uniformities with the *a priori* concepts (and principle) of causality. Insofar as particular causal laws merely record observed regularities they are contingent and *a posteriori*; insofar as they subsume such regularities under the *a priori* principle of causality, however, they are necessary – and even, in a sense, *a priori*. (1992a, p. 174)

In other words, due to the fact that empirical laws are subsumed under the absolutely necessary *a priori* laws of understanding, Friedman argues that empirical laws carry some kind of necessity and in that respect they are in a way *a priori*. 
The thesis that the Second Analogy proves both the existence and the necessity of particular empirical causal laws is important for the strong reading, because only then can Kant attain his goal of addressing the Humean problem. The Humean problem that awoke Kant from his “dogmatic slumber” and Kant addresses in the Second Analogy, on the strong reading, is Hume’s problem of induction, which undermines the validity of the principle of the uniformity of nature. According to Friedman and De Prierris, while Kant attempts to address Hume’s problem of induction in his earlier works, he finally presents a solution to it in the Second Analogy by proving the existence of necessary (and strictly universal) particular causal laws. In other words, by demonstrating the existence of necessary (and strictly universal) empirical laws the Second Analogy, on the modest reading, guarantees the “unity of experience,” which corresponds to Hume’s principle of the “uniformity of nature,” and thereby solves Hume’s problem of induction. As Friedman and De Prierris put it:

The Analogies of Experience provide an a priori conception of the unity and uniformity of experience playing the role, for Kant, of Hume's principle of the uniformity of nature. According to the Analogies we know a priori that nature in general must consist of interacting substances in space and time governed by universally valid and necessary causal laws […], and this articulated a priori conception of nature in general amounts to the knowledge that nature is, in fact, sufficiently uniform. (SEP)

In other words, by showing that all events are subject to necessary (and strictly universal) particular empirical causal laws, Kant’s Second Analogy argument presents an a priori demonstration of the unity of experience, which according to De Pierris and Friedman seems to be equivalent to Hume's principle of the uniformity of nature. In other words, by demonstrating the unity of experience, on Friedman and De Pierris’s reading, “Kant thinks that he has an answer to the Humean problem of induction” (SEP).
D. Conclusion

So far, we saw that the modest and the strong readings of the Second Analogy disagree on whether the Causal Principle guarantees the existence of particular causal laws and whether those laws are merely contingent inductive generalizations that can express a kind of necessity only in a system of laws or they are strictly universal and necessary rules whose necessity does not derive from being a member of a systematic structure of empirical laws. We also saw that the disagreement between the two readings with regard to what the Second Analogy argument establishes, in particular, whether it proves the existence and necessity of particular empirical causal laws stem from a deeper disagreement on the particular Humean problem Kant aims to address in the Second Analogy: while the modest reading describes the Second Analogy as Kant’s response to the Humean problem of causation, the strong reading views it as a response to the Humean problem of induction.

Having identified the main points of disagreement between these two popular readings, it is clear that unless we have an accurate account of what Kant’s Second Analogy argument establishes, we cannot provide a complete solution to Kant’s problem of empirical laws. Determining what the Second Analogy argument establishes, on the other hand, requires identifying Kant’s target with that argument. While scholars agree that in the Second Analogy Kant aims to provide a solution to the Humean problem, they disagree on the nature of the Humean problem Kant addresses, which in turn seems to play a role in their interpretation of what the argument establishes.

It is, therefore, essential that we first determine whether Kant’s Second Analogy addresses the Humean problem of causation or the problem of induction, Identifying
Kant’s target in the Second Analogy, however, requires the ability to identify those problems well enough to know the necessary steps that one should take to solve them. Hence, before we can start analyzing the Second Analogy and examine its implications for the existence of necessary of empirical laws, we need to have some background knowledge of Hume’s skeptical problem of causation and induction. Through close analysis of Hume’s skeptical arguments against causation and induction, the next chapter aims to provide us with such background to the Second Analogy.
CHAPTER III: HUME’S PROBLEMS OF CAUSATION AND INDUCTION

A. Introduction

As we saw in the previous chapter, the reason why scholars disagree on the status of empirical laws is partially due to their different readings of the Second Analogy, which in turn results from attributing different objectives to Kant’s argument. While commentators agree that in the Second Analogy Kant aims to solve the Humean problem, they disagree on the nature of the Humean problem. Hence, before we move on to analyzing Kant’s Second Analogy argument, we first need to get clear on Kant’s engagement with Hume and identify the Humean problem, to which Kant addresses in the Second Analogy. This, however, cannot be done unless we understand the nature of and the relationship between the different problems Hume introduces and determine the particular metaphysical principles Hume challenges through these problems. That is why by focusing on Hume’s treatment of causation the current chapter provides the philosophical background to Kant’s Second Analogy argument. ¹

More specifically, I identify the different problems with which Hume was concerned independently of how Kant perceived them. Hume’s discussion of causation will be examined in three parts. I will first explain how Hume’s arguments against the justification of the Causal Principle (CP), namely “every event has a cause” principle in the Treatise and his arguments against the Principle of the Uniformity of Nature (PUN), which states roughly that nature is uniform in a way that future resembles the past generate different problems, namely the “problem of causation” and the “problem of induction” respectively. In that respect I follow Lewis White Beck’s distinction between the “problem of causation” and the “problem of induction” respectively. In that respect I follow Lewis White Beck’s distinction between the “problem of causation” and the “problem of induction” respectively. In that respect I follow Lewis White Beck’s distinction between the “problem of causation” and the “problem of induction” respectively. In that respect I follow Lewis White Beck’s distinction between the “problem of causation” and the “problem of induction” respectively.

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¹ All references to Hume’s A Treatise of Human Nature (abbreviated as “T”) are from Selby-Bigge Ed. (Oxford at the Clarendon Press, 1955) and include, book, part, section followed by a space, then the page number. In the case of the Enquiries Concerning Human Nature (abbreviated as “EHU”), references are from Tom L. Beauchamp’s Edition (Oxford University Press, 1999) and they include section, part and page number.
induction.” According to Beck, while the “problem of causation” constitutes Hume’s skeptical attack on the validity of the Causal Principle, i.e., “every-event-some-cause” principle, the “problem of induction” is a problem about the validity of the “same-cause-same-effect” principle. Contra Beck, I argue that the problem of induction undermines the Principle of the Uniformity of Nature (PUN), not the same-cause-same-effect principle.  

B. Hume’s Problem of Causation

Hume distinguishes two kinds of perceptions, namely ideas and impressions. Ideas, for Hume, are less vivid copies of impressions (T. I.I.I.). Ideas can be either simple or complex. While simple ideas are direct copies from simple impressions, complex ideas, which are composed of simple ideas, do not have to correspond to complex impressions (T. I.I.II). For instance the complex idea of golden mountains does not correspond to any impression, but rather a mere product of the imagination. Hume also distinguishes between impressions of sensation and impressions of reflection. In contrast with impressions of sensation, which arise from unknown sources, the impressions of reflection are feelings that arise from the reflection on ideas. For instance reflection on the idea of pleasure can produce the new impression of desire, which is an impression of reflection (T. I.I.II).

Hume questions the possibility of causal knowledge in the traditional sense by analyzing the idea of causation utilized by his predecessors. The traditional idea of causation, according to Hume, is a complex idea, which is composed of the ideas of contiguity, priority of the cause in

2 See Beck’s account of the distinction in “A Prussian Hume and a Scottish Kant” in Essays on Kant and Hume, pp. 111-29.
time and most importantly, the idea of necessary connection. For Hume, we normally suppose that the idea of causation derives from a kind of relation among objects. As he writes:

And indeed there is nothing existent, either externally or internally, which is not to be consider’d either as a cause or an effect; tho’ ’tis plain there is no one quality, which universally belongs to all beings, and gives them a title to that denomination. The idea, then, of causation must be deriv’d from some relation among objects; and that relation we must now endeavour to discover. (T. I. III. II. p. 45)

Although we think of every object either as a cause or an effect, the idea of causation cannot be derived from a common feature of all objects because there is no such common quality that all objects possess. Thus, in his examination of the legitimacy of this idea of causation, Hume focuses his attention on the idea of necessary connection.

The phrase “legitimacy of an idea” might sound strange to a contemporary reader for it is not clear what it means to say that ideas, as opposed to propositions, are legitimate or justified. According to Hume, some ideas that cannot be traced back to corresponding sense impressions are products of mere imagination or as Hume calls it “pure offspring of the fancy” are fictitious ideas (T. I.III.IX, p. 69). For instance, the idea of self-identity, for Hume, is fictitious idea presented to us merely by the operations of the imagination (T. I.IV.V, p.132). Therefore, the questions regarding the legitimacy of ideas should be interpreted as questions regarding their proper origin and whether their origin entitles us to assume that there is corresponding object or relation in the world. Since legitimate ideas are not fictitious in the sense that they are not merely the products of imagination, they entitle us to infer the existence of corresponding objects. Similarly, if the idea of causation is a legitimate idea, it must correspond to some impression of sensation, rather than a product of our faculty of imagination.

3. In the Treatise, Hume lists the components of the traditional conception of causation as: Contiguity, T. I.III.II. p. 75; Succession or Priority of cause in time, T. I.III.II p. 76; Necessary connection, T. I.III.II p. 77. In the Enquiry, however, Hume no longer thinks that the idea of contiguity is a necessary component of the idea of causation.
Instead of undertaking a direct analysis of the content of the idea of necessary connection, in the *Treatise*, Hume raises two questions regarding our belief in the existence of necessary connections. The examination of these questions, he argues, will help us understand the nature of the necessary connection. As Hume puts it,

‘Tis necessary for us to leave the direct survey of this question concerning the nature of that *necessary connexion*, which enters into our idea of cause and effect; and endeavor to find some other questions, the examination of which will perhaps afford a hint, that may serve to clear up the present difficulty. Of these questions there occur two, which I shall proceed to examine *viz.* First, For what reason we pronounce it *necessary*, that everything whose existence has a beginning, shou’d also have a cause? Secondly, Why we conclude, that such particular causes must *necessarily* have such particular effect; and what is the nature of that *inference* we draw from the one to the other, and of the *belief* we repose in it? (T, I.III.III. p. 78)

Hume believes that close examination of these questions can enlighten us regarding the nature of the idea of necessary connection. The first question (“For what reason we pronounce it *necessary*, that everything whose existence has a beginning, shou’d also have a cause?) is about a widely accepted metaphysical principle, according to which everything that begins to exist is necessarily caused by something else. Note that the principle does not state that “everything that exists must have a cause”; instead, the principle applies only to things that begin to exist at some point in time. Therefore, God, who, by definition, exists necessarily and eternally and consequently does not have a beginning in time, does not have a cause that is prior to him in time. In this respect, the principle applies merely to contingent things, i.e., things that could have not existed. With this qualification in mind, for the sake of brevity, we will refer to the principle “everything that exists must have a cause.” We will refer to this principle as the General Causal Principle or merely the Causal Principle (CP).

Hume’s second question (Why we conclude, that such particular causes must *necessarily* have such particular effects; and what is the nature of that *inference* we draw from the one to the
other, and of the belief we repose in it?), on the other hand, is about the justification of our particular causal inferences which assume the existence of necessary connections between objects in the world.

As we shall see, Hume’s analysis of the second question reveals that when we make an inference from a particular cause to its effect or vice versa we assume the principle of the uniformity of nature, which, as Hume argues, is an unjustified principle. Hume’s critique of the principle of the uniformity of nature constitutes the problem of induction. I will examine Hume’s response to the second question and explain how it generates the problem of induction in the next section. Before that, however, let us first focus on his response to the first question and how it leads to his thorough critique of CP, which generates a different problem, namely the problem of causation.

(i) Hume’s first question: Is the Causal Principle necessary?

Hume’s first question (“For what reason we pronounce it necessary, that everything whose existence has a beginning, shou’d also have a cause?”) is about the necessity of a fundamental metaphysical principle. While in the first part of the question (“For what reason we pronounce it necessary”), Hume makes it clear that he is interested in examining the justification for our belief in the necessity of a principle, in the second part (“that everything whose existence has a beginning, shou’d also have a cause?”), he presents the principle in question. Hume calls this principle, “the general maxim in philosophy that whatever begins to exist, must have a cause of existence” (T, I.III.III. p. 78).

In the formulation of this first question, Hume refers to necessity twice by way of using the terms “necessary” and “shou’d.” Although this double necessity seems confusing at first sight, closer examination reveals that here Hume makes reference to two different kinds of
necessity, namely the necessity of the principle itself and the causal necessity, i.e., the necessity of connections among objects. As the question implies, according to Hume, we believe that it is a necessary fact that there are necessary causal connections in the world. In this respect, Hume’s first question suggests that we take the existence of necessary causal connections among objects to be a necessary feature of the world. To put it differently, for Hume, CP is commonly considered to be a necessary truth. Hence, by raising the question why we think that CP holds necessarily, Hume calls into question a prevalent assumption that it is a necessary fact about the world that every event has a cause.

Although Hume does not explicitly attribute this assumption to any particular school of thought, it is clear that he has both the rationalist philosophers in mind. As Hume puts it:

To begin with the first question concerning the necessity of a cause: 'Tis a general maxim in philosophy, that whatever begins to exist, must have a cause of existence. This is commonly taken for granted in all reasonings, without any proof given or demanded. 'Tis suppos’d to be founded on intuition, and to be one of those maxims, which tho' they may be deny’d with the lips, 'tis impossible for men in their hearts really to doubt of. (T. I.III. III, p. 47)

Here, Hume asserts that CP is taken to be “founded on intuition”, meaning that it is taken to be known through the faculty of intuition. The faculty of intuition, unlike the faculty of reason and the senses, is supposed to provide us immediate insight into the necessity of indubitable truths. Rationalists maintain that intuition can also give us self-evident and necessary truths about the world.

According to some rationalists, we know that CP is a necessary truth intuitively. According to the rationalists, on the other hand, CP is an *a priori* principle that can be known independently of experience through the faculty of reason alone, and like all other *a priori* principles it holds necessarily. In the rationalist view, either reason or intuition informs us about
the necessary facts about the way the world is. Accordingly, the necessity of CP can be known through rational arguments that involve merely conceptual analysis.

Even though the rationalists disagree on the source of justification for the necessity of CP, they agree that it is a necessary truth. With the first question (“For what reason we pronounce it necessary, that everything whose existence has a beginning, shou’d also have a cause?”), then, Hume calls into question both the rationalists’ view regarding the necessity of CP. Note that Hume does not question the truth value of CP. He rather questions our reasons for thinking that CP is a necessary truth about the world.

(ii) Do we know the necessity of the Causal Principle (CP) independently of experience?

Let us now look briefly at Hume’s critique of the rationalists’ account of CP. In contrast with the rationalists, Hume argues that CP is not a self-evident truth that can be known intuitively through reason or intuition. He argues that all intuitive certainty or necessity that is known intuitively arises from the comparison of ideas and from the discovery of certain unalterable relations between ideas, such as resemblance, proportions in quantity and number, degrees of any quality and contrariety. Since the CP, according to Hume, does not follow from any of these infallible relations, it is not an intuitively certain principle (T, I.III.III. p. 79). For instance, for Hume, arithmetical and geometrical truths, such as the square of the hypotenuse is equal to the squares of the other two sides and three times five equals half of thirty, are intuitively certain statements whose necessity can be grasped immediately. Such statements express unalterable relations between figures or numbers (EHU, Sect 4, p. 11). Unlike the mathematical and geometrical principles, however, Hume argues that CP does not follow from
these infallible relations. Hence, CP is not an intuitively certain principle whose necessity can be known immediately through intuition.

According to Hume, the necessity of CP cannot be known through conceptual analysis or deductive reasoning either. According to some, CP is necessary because the idea of cause necessarily entails the idea of effect. In response to this view, Hume argues that the ideas of “cause” and “effect,” when taken as “correlative ideas,” necessarily entail each other. Since we cannot separate the concept of “cause” from its correlative concept of “effect,” it is indeed a conceptual truth that “every effect must have a cause;” Hume admits that every “effect” would presuppose a “cause, just as every “wife” would presuppose a “husband” (T, I.III.III. p. 82). However, as Hume rightly points out, such conceptual relations do not inform us of the way the world really is. Just as knowing that every husband must have a wife does not inform us of the existence of husbands and wives, knowing that every effect must have a cause would not inform us of the existence of any causal relation in the world.

In order to know whether we can know the existence of causal relations in the world, we need to look beyond conceptual relations. The real question, therefore, is whether “every man must have a wife” or “every event must have a cause”? In other words, Hume argues that we should ask whether the concept “event” contains the concept “cause.” As will be clear, Hume’s response to this question is negative.

Having showed that the arguments offered by both the rationalists fall short of proving that CP is a necessary truth, Hume offers a further argument that shows why one can never prove the necessity of CP, either intuitively or demonstratively:

But here is an argument, which proves at once, that the foregoing proposition is neither intuitively nor demonstrably certain. We can never demonstrate the necessity of a cause to every new existence, or new modification of existence, without showing at the same time the impossibility there is, that any thing can ever
begin to exist without some productive principle; and where the latter proposition cannot be prov’d, we must despair of ever being able to prove the former. (T, I.III.III. p. 47)

Hume makes it clear that we can never demonstrate the necessity of CP without showing the impossibility of its negation. Note that by necessity, Hume has “logical necessity” in mind. Negation of a logically necessary statement is impossibility or contradiction. Similarly, if CP is a (logically) necessary proposition, then its negation, as Hume says, must be “impossible”. So, unless the impossibility of the negation of CP is demonstrated, one cannot assume that CP is a necessarily true proposition.

According to Hume, one cannot demonstrate that the negation of CP is impossible because the negation of CP does not lead to a contradiction. For Hume, the negation of CP is conceivable. In other words, since it is conceivable that events happen without being caused by anything at all, Hume argues, one cannot demonstrate the impossibility of an event happening without a cause. As Hume writes,

Now that the latter proposition [it is impossible that an event exists without a cause] is utterly incapable of a demonstrative proof, we may satisfy ourselves by considering that as all distinct ideas are separable from each other and, and as the ideas of cause and effect are evidently distinct, ’twill be easy for us to conceive any object to be non-existent this moment, and existent the next, without conjoining to it the distinct idea of a cause or productive principle. (T, I.III.III. p. 47)

The reason why Hume thinks that one cannot show the impossibility of an event happening without a cause is that the ideas of “cause” and “event” or “whatever begins to exist” are conceptually distinct from each other. Given that the ideas of “cause” and “event” are distinct ideas, it follows that they are conceivable independently from each other. This in turn

4. In several passages Hume uses the term “objects” to refer to “ideas” which are mental objects. According to Hume, we are not justified in believing in the identity of objects in time. According to Hume, changes in the states of the objects should be understood as new things that begin to exist in a different state. Hence, by “the things that begin to exist” he seems to mean the change in the state of objects, i.e., events.
means that it is possible for an event to occur without a cause for its occurrence. As Hume puts it:

The separation, therefore, of the idea of a cause from that of a beginning of existence, is plainly possible for the imagination; and consequently the actual separation of these objects is so far possible, that it implies no contradiction nor absurdity; and is therefore incapable of being refuted by any reasoning from mere ideas; without which ‘tis impossible to demonstrate the necessity of a cause. (T, I.III.III. p. 47-8)

In a nutshell, Hume’s argument starts by pointing out that the ideas of “cause” and “event” are conceptually distinct. He then goes on to argue that since they are conceptually distinct, they can also be imagined independently of each other. For Hume, if it is imaginable that an event occurs without a cause for its existence, then it is actually possible that there is an event without a cause. Thus, it is not necessarily true that every event must have a cause. In brief, by showing the possibility of the negation of CP, Hume shows that CP is not a (logically) necessary principle that can be known either intuitively or demonstratively.

As we have just seen, in the Treatise, Hume attacks the common metaphysical assumption that everything must have a cause is a necessarily true principle. By demonstrating that the necessity of this principle, namely the Causal Principle (CP) can be known neither through intuition nor through mere deductive reasoning, Hume attacks the rationalists philosophers.

Hume next considers whether our belief in the necessity of CP originates from experience.

(iii) Do we know the necessity of the Causal Principle (CP) through experience?

Since neither intuition nor reason alone can justify our belief in the necessity of CP, if we are justified that CP is a necessary truth, Hume argues, that justification must come from experience. As Hume puts it:

Since it is not from knowledge or any scientific reasoning that we derive the opinion of the necessity of a cause to every new production, that opinion must
necessarily arise from observation and experience. The next question, then, shou’d naturally be, how experience gives rise to such a principle? (T, I.III. IV. p. 82)

Hume assumes that there can be only two sources of knowledge, namely scientific reasoning or knowledge and experience or observation. Hume makes a parallel distinction in the Enquiry. There, he argues that there are two kinds of judgments, namely “relations of ideas” or “scientific knowledge” and “matters of fact” or “probable knowledge,” which respectively refer to judgments we know through reason or demonstrative proofs and empirical judgments that we know through experience (EHU, Sect 4. Part 1, p. 108). He asserts that our certainty and evidence for matters of fact truths have a different nature than our certainty and evidence for relations of ideas. While our certainty and evidence for the truths of relations of ideas are independent of what exists in the world and discoverable through mere reasoning, our certainty and evidence for the truths of matters of fact depends on the relation of cause and effect (EHU, Sect 4. Part 1, p. 108f).

After presenting his argument that shows the necessity of CP cannot be known through scientific reasoning or relations of ideas, Hume moves on to exploring whether our certainty and evidence for CP comes from experience or observation. Instead of immediately undertaking an inquiry in order to determine whether experience can justify our certainty for the truth of CP, however, Hume once again shifts his focus to a different question. As Hume writes:

But as I find it will be more convenient to sink this question in the following, Why we conclude, that such particular causes must necessarily have such particular effects, and why we form an inference from one to another? we shall make that the subject of our future inquiry. ‘Twill, perhaps, be found in the end, that the same answer will serve for both questions. (T, I.III.IV. p. 82)

Note that rather than examining how experience can justify our belief in the necessity of CP, Hume turns to the second question he raised in the beginning of his examination, which he formulated as follows: “Secondly, Why we conclude, that such particular causes must
necessarily have such particular effect; and what is the nature of that inference we draw from the one to the other, and of the belief we repose in it?” (T, I.III.III, p.78).

Hume’s second question significantly differs from his first question. First of all, while the first question challenges the common assumption that everything in the world is causally connected, his second question challenges another common assumption, namely, that we can know particular causal connections. In this regard, unlike the first question, which is about a necessary feature of the world, the second question is about the legitimacy of our particular causal inferences. That is why in the literature Hume’s first question is considered to be attacking the General Causal Principle, while his second question is thought to be about the Particular Causal Principle that governs our particular causal inferences according to which similar causes have similar effects.

Moreover, with the second question, Hume shifts his focus from our belief in the necessity of a general metaphysical principle to our belief in the existence of necessary connections among objects in the world. By doing so, Hume begins to examine the nature of causal necessity, which as we saw must be different from logical necessity and cannot be known through mere conceptual analysis.

Interestingly, Hume believes that answering the second question will also inform us about why we believe that CP is a fundamental principle that holds necessarily. In other words, according to Hume, understanding the way we form beliefs about particular causal connections will help us understand why we think that CP is a necessarily true principle. The reason seems to be that, in his view, we form the general belief in the necessity of CP due to our repetitious observation of similar instances of particular causal relations. That is, our certainty in the belief
that every event must have a cause can be simply a result of generalizing from our experience of multiple particular causal relations.

Let us now try to understand why Hume thinks that experience can produce our belief in the existence of necessary relations among objects. It is clear that experience, for Hume, can result with our certainty or the necessity of causal relations. As he writes, “Since it is not from knowledge or any scientific reasoning that we derive the opinion of the necessity of a cause to every new production that opinion must necessarily arise from observation and experience” (*Treatise*, I.III.IV, p. 82). The key term we need to understand here, of course, is “necessity.”

Hume does not think that since reason is not capable of producing it, we must have derived the opinion of the “necessity” of CP from experience. By the “opinion of necessity”, he rather means our belief in the “certainty” of CP. In this respect, Hume’s second question should be read as follows: “Since it is not from knowledge or any scientific reasoning that we derive the certain opinion that every event must have a cause that opinion must necessarily arise from observation and experience.” Having derived CP based on generalization from the experience of particular causal connections, our certainty and evidence for the truth of CP, assuming that it is, in fact, true, must result from the multiplicity of experiential evidence. I hope it is now clear why Hume is convinced that the answer to the second question concerning the justification of particular causal connections can also help us answer the first question concerning our certainty about the necessity of CP.

L.W. Beck interprets Hume’s shift as an indication that Hume does not even entertain the possibility that the CP could have an empirical justification. In contrast with Beck, I think Hume’s move is pragmatically motivated. As will be clear, for Hume, there is only one kind of necessity. Instead of trying to examine whether experience can justify our belief that it is a
necessary fact about the world that every event has a cause, he chooses to examine whether
evidence can justify our belief that certain particular events necessarily follow other particular
world that everything that exists has a cause. Hume’s seemingly
unmotivated shift from the first question to the second question, therefore, suggests that if CP
has experiential evidence at all, in his view, it must be derived through inductive reasoning from
our experience of great number of particular causal relations. That is, unless our particular causal
inferences are justified, CP cannot be empirically justified either.

Having made the connection between these two questions explicit, it is now clear that
Hume needs to examine the nature and the justificatory status of our particular causal inferences.
That is why he cannot provide a short answer to the question whether experience can justify our
belief in the necessity of CP without first providing a detailed analysis of our particular causal
inferences. That is, unless Hume provides an answer to the second question, he cannot fully
respond to the first question. Let us, now, focus on Hume’s analysis of our particular causal
inferences. This will, hopefully, illuminate why, according to Hume, philosophers cannot appeal
to particular causal inferences to justify the necessity of CP.

C. Hume’s Problem of Induction

(i) Hume’s Second Question: How do we know particular causal relations?

As we have seen, Hume’s second question, (“Why we conclude, that such particular
causes must necessarily have such particular effects; and what is the nature of that inference we
draw from the one to the other, and of the belief we repose in it?”) is about the justification for
our particular causal inferences. What is significant in this question is that it leads to an
examination of the nature of our inferences concerning particular causal connections, which we
take to hold necessarily. When we observe a particular event, for instance, we assume not only that it must have some cause and that it will have some effect, but we also think that it must be caused by a particular event of a certain type or it will be followed by another particular event of a certain type.

In the *Enquiry*, Hume exclusively focuses on the second question and starts to examine the nature and the legitimacy of our particular causal inferences. That is why in the *Enquiry* Hume does not touch upon the problem concerning the legitimacy of the assumption that CP is a necessary truth. Instead of arguing against the assumption that CP is a necessarily true principle that can be known through reason alone, there he argues against the assumption that we can know particular causal connections through reason alone.

In order to see if we are justified in making particular causal inferences there are two points that we need to pay attention to. First, when we make a causal inference we infer the existence of a particular event we have not yet experienced. This, according to Hume, makes causal relations unique. Unlike any other relation, in causal relations, Hume writes, “the mind can go beyond what is immediately present to the senses, either to discover the real existence or the relations of objects. 'Tis only causation, which produces such a connexion, as to give us assurance from the existence or action of one object, that 'twas follow’d or preceded by any other existence or action” (T.I. III.II., p.44). In other words, causation is the only relation that informs us of the existence of objects or events, which we do not immediately experience.\(^5\)

Hume illustrates this feature of causal inferences with the following examples. When a man finds a watch in a deserted island, he infers that there must have been a man in that island. Or, when we hear a rational conversation, we infer the existence of a person. According to

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5. Hume makes the same point in the *Enquiry*: “All reasonings concerning matter of fact seem to be founded on the relation of *Cause and Effect*. By means of that relation alone we can go beyond the evidence of our memory and senses.” (EHU, Sect.4. Part1, p. 109).
Hume, all reasoning in similar structure is based on the presumption that there is either a close or remote relation that necessarily connects the present impression to the fact which is inferred from it. (EHU, Sect.4. Part1, p. 109). This means that when we make a causal inference we assume that there is some connection between our direct experience of an object, which corresponds to an impression of that object, and another object that has not been experienced, namely the idea of another object. Hence, causal inferences enable us to predict the existence of objects that we do not directly experience. Second, we think that the connection between the impression of an object and the idea of another object is necessary. That is, when we make causal inferences we believe that the causally connected objects follow each other necessarily. In this respect, being able to make causal inferences presupposes the knowledge of particular causal connections among objects.

The next question, then, is what kind of justification do we have, if at all, for our knowledge of particular causal connections? As we have seen, there are for Hume two proper sources of justification, namely reason and experience. Thus, we can have either a priori demonstrative knowledge or merely empirical and probabilistic knowledge of particular causal relations. In what follows, we will examine whether Hume thinks that we have a priori or empirical knowledge of particular causal connections.

(ii) Do we know particular causal relations a priori?

Hume argues that we cannot have demonstrative knowledge of particular causal relations because particular objects or events are distinct and separable from each other. As Hume puts it:

There is no object, which implies the existence of any other if we consider these objects in themselves, and never look beyond the ideas, which we form of them. Such an inference wou’d amount to knowledge, and wou’d imply the absolute contradiction and impossibility of conceiving any thing different. But as all distinct ideas are separable, ’tis evident there can be no impossibility of that kind. When we pass from a present impression to the idea of any object, we might possibly
have separated the idea from the impression, and have substituted any other idea in its room. (T. I.III.VI. p. 51)

As Hume explains, when we have an impression of an object, let us say “fire,” there is nothing in that impression that compels us to infer that the impression must be followed by another particular object such as “heat”. Once we have the impression of “fire” we also have the idea of “fire” that is the mere copy of that impression and, for Hume, no matter how much we analyze the corresponding idea, we will not find the idea of “heat”. In other words, we can separate the impression of the “fire” from the idea of “heat” and substitute the latter with another idea, let us say “cold” without any contradiction. For Hume, then, our causal inference that predicts the existence of heat based on the experience of fire cannot be justified through demonstrative arguments. In other words, just by analyzing our idea of “fire” we cannot infer that there must be “heat”.

In contrast with his Treatise argument, in the Enquiry, Hume explains why reason alone cannot inform us of particular causal relations by pointing out the independence of effects from their causes as opposed to the independence of their ideas. As he writes, “The mind can never possibly find the effect in the supposed cause, by the most accurate scrutiny and examination. For the effect is totally different from the cause, and consequently can never be discovered in it”. (EHU. Sec.4, Part1, p.111). He illustrates the distinctness and the independence of different objects and events with the following famous example,

Suppose for example that I see one billiard ball moving in a straight line towards another: even if the contact between them should happen to suggest to me the idea of motion in the second ball, aren’t there a hundred different events that I can conceive might follow from that cause? May not both balls remain still? May not the first bounce straight back the way it came, or bounce off in some other direction? All these suppositions are consistent and conceivable. Why then should we prefer just one, which is no more consistent or conceivable than the rest? (EHU. Sec.4, Part1, p.13-4)
Note that when we make a particular causal inference we expect a particular effect, in this case the motion in the second billiard ball, to follow a particular cause, that is the impact of the first ball. In fact, we think that the motion of the second billiard ball necessarily follows the impact of the first. And yet, our impression of the impact of the two billiard balls does not compel us to think of one particular idea. We can consistently think of multiple different ideas that can follow the impression in question.

To put it differently, it is conceivable or logically possible that each one of these multiple effects might follow the particular event of one billiard ball hitting the other. Because these two events are distinct and can be thought independently from each other, the proposition that “the motion of the second ball necessarily follows the impact of the first billiard ball” cannot be said to be a logical or conceptual necessity. Thus, Hume concludes, reason (independently of experience) falls short of providing us with the knowledge of particular causal relations that express necessary connections among events. Thus, he proceeds to examine whether we know particular causal relations through experience.

(iii) Do we know particular causal connections through experience?

Hume reasons that there is no purely rational justification for our particular causal inferences: if we are justified in making such causal inferences our justification must be based on experience. The next question is how could experience allow us to infer not only the existence of events that we have not yet experienced but also make us predict their nature with such confidence? In other words, how could experience give us the knowledge of particular necessary connections among objects? Hume’s answer to that question is as follows:

We remember to have had frequent instances of the existence of one species of objects; and also remember, that the individuals of another species of objects have always attended them, and have existed in a regular order of contiguity and succession with regard to them. Thus we remember to have seen that species of
object we call flame, and to have felt that species of sensation we call heat. We likewise call to mind their constant conjunction in all past instances. Without any farther ceremony, we call the one cause and the other effect, and infer the existence of the one from that of the other. (T. I.III.VI. p. 51)

Here, Hume explains how we come to identify causes and effects based on our experience of constantly conjoined, contiguous and successive events. After experiencing many instances of particular type of events being followed by other instances of particular type of events, we call them causes and effects. Note that constant conjunction is another essential feature of our causal inferences. Only after we experience the constant conjunction of particular events, do we identify events as causes and effects. Thus, Hume introduces another component of the idea of causation, namely constant conjunction.

Having discovered that what we take to be particular causal connections are based on the constant conjunction of different kinds of events, we then use that knowledge to make causal inferences that involve inferring the existence and behavior of objects that we have not experienced. Given that causally connected objects (or events) are considered to be necessarily connected to each other, when we experience an event we infer that it must be followed or preceded by a particular kind of event. Based on our past experience of constantly conjoined events, we infer the existence of particular events that are not directly experienced.

Although our repeated experience of constantly conjoined, successive and contiguous events of different kinds explain how we come to identify particular causes and effects, it is still not clear how our experience of constant conjunction produces the idea of causation that contains the idea of necessary connection. In other words, it is not clear how mere repetition of constantly conjoined events can produce a new idea in us, namely the idea of necessary connection (T. I.III.VI. p. 52).
While our experience of the constant conjunction of events helps us *discover* which events have constantly conjoined with which, it is not clear whether such past experience *justifies* making an inference concerning the existence of one object based on our experience of another. It is important to note that both in the *Enquiry* and in the *Treatise* Hume, questions the source of justification for our causal inferences rather than how we come to discover particular causal connections. In the *Enquiry*, for instance, he firmly asserts that experience enables us to discover particular cause and effects. Hume writes,

This proposition, that causes and effects are discoverable, not by reason but by experience, will readily be admitted with regard to such objects, as we remember to have once been altogether unknown to us; since we must be conscious of the utter inability, which we then lay under, of foretelling what would arise from them. Present two smooth pieces of marble to a man who has no tincture of natural philosophy; he will never discover that they will adhere together in such a manner as to require great force to separate them in a direct line, while they make so small a resistance to a lateral pressure. (*EHU*, Sect IV. Part I.)

Hume suggests that one cannot make any causal inferences without first identifying the particular causal connections or causal properties of objects. Hence, a person who is not informed of the causal properties of marble and discover causal connections of marble with other objects would not be able to make any causal inference, i.e. of foretelling what would arise from such knowledge. Although he thinks that we *discover* particular causal connections through experience alone, he does not think that experience can *justify* our causal inferences that are based on the knowledge of those particular causal connections.

Since there is no guarantee that objects, which were constantly conjoined in the past, would still be conjoined in the future, one cannot make an inference concerning the existence of an object based on one’s past experience. Hence, it seems that experience of constant conjunctions cannot suffice to justify our causal inferences. Hume, therefore, argues that when we make a causal inference either we produce the idea of causal necessity either through
“reasoning from experience”, namely through inductive reasoning or our imagination works on experience and produces that idea (T. I.III.VI. p. 52). As he puts it:

Since it appears, that the transition from an impression present to the memory or senses to the idea of an object, which we call cause or effect, is founded on past experience, and on our remembrance of their constant conjunction, the next question is, Whether experience produces the idea by means of the understanding or of the imagination; whether we are determin’d by reason to make the transition, or by a certain association and relation of perceptions. (T. I.III.VI. p. 52)

In the *Enquiry*, Hume makes the same point when he searches for the foundation of our empirical inferences. Thus, he searches the source of our inferences from experience or rather the source of our justification for the empirical conclusions. As he writes,

What is the nature of all our reasonings concerning matter of fact? the proper answer seems to be, that they are founded on the relation of cause and effect. When again it is asked, What is the foundation of all our reasonings and conclusions concerning that relation? it may be replied in one word, Experience. But if we still carry on our sifting humour, and ask, What is the foundation of all conclusions from experience? this implies a new question, which may be of more difficult solution and explication. (EHU, Sect. IV. Part II.)

The next question, then, is: which faculty works on our past experience to produce our idea of causal necessity? Let us now examine whether Hume thinks that we can arrive at the idea of necessary connection through inductive reasoning.

(iv) **Do we know particular causal relations through inductive reasoning?**

According to Hume, our causal inferences consist of inferring what is not experienced from what is experienced. For example, when we infer the existence of fire based on our experience of smoke, we make a causal inference as we infer the existence of a cause based on our experience of its cause. The formal structure of causal inference looks as follows:

(P1) So far, every time I’ve experienced smoke, it was caused by fire.

(P2) I experience smoke.

Conclusion: There must be a fire that causes the smoke.
According to Hume, the conclusion does not follow from the premises P1 and P2 and it is not a valid argument unless we supplement it with an additional premise that can justify our projection of past experience to present and future cases. In other words, if our causal inferences are based on reasoning that involve empirical premises, then we need a premise that makes the argument a valid. This additional premise is the Principle of the Uniformity of Nature (PUN). As Hume presents it, “If reason determin’d us, it wou’d proceed upon that principle, that instances, of which we have had no experience, must resemble those, of which we have had experience, and that the course of nature continues always uniformly the same” (T. I.III.VI. p. 52).

Note that the PUN guarantees that we are justified in assuming that our past experience is a reliable indicator of how the future will be. That is, unless we assume that nature continues in a uniform fashion, we cannot justifiably claim that particular causal connections we discovered in the past will continue to be conjoined in the present and future cases. As Hume writes, in all of our causal inferences, then, we presuppose that “instances, of which we have had no experience, must resemble those, of which we have had experience, and that the course of nature continues always uniformly the same” (T, I.III.VI. p. 89). That said, for us to infer the existence of fire through reason, i.e., deductively from our experience of smoke, we need both the past experience and the assurance that they will continue to be conjoined in the future as well. The formal structure of a valid causal reasoning would, therefore, look as follows:

(P1) All instances of smoke that have been observed in the past were caused by fire.

(P2) Instances, of which we have had no experience, must resemble those, of which we have had experience and nature is uniform (PUN).

(P3) I experience smoke.

Conclusion: There must be a fire that causes the smoke.
It is now hopefully clear that whether we are justified in making particular causal inferences depends on whether the principle of the uniformity of nature (PUN) is also justified.

(v) **Why is the Principle of the Uniformity of Nature (PUN) unjustified?**

According to Hume, PUN has no rational basis. As Hume argues, neither demonstrative reasoning nor inductive reasoning can justify PUN. According to Hume, truths with demonstrative proofs are necessary truths. Accordingly, if PUN has a demonstrative proof, it means that it is a necessary truth whose negation leads to a contradiction. However, as Hume points out, it is imaginable, and therefore possible that PUN is false, i.e., there is a change in the course of nature. This in turn suggests that the PUN is not a necessary truth that has a demonstrative proof. As Hume puts it,

[T]here can be no demonstrative arguments to prove, that those instances, of which we have had no experience, resemble those, of which we have had experience. We can at least conceive a change in the course of nature; which sufficiently proves, that such a change is not absolutely impossible. To form a clear idea of any thing, is an undeniable argument for its possibility, and is alone a refutation of any pretended demonstration against it. (T. I.III.VI. p, 52)

Since propositions that have demonstrative proofs are necessary truths, if the negation of a proposition is possible, for Hume, this implies that the proposition in question is not a necessary truth and therefore no demonstrative proof for that proposition can be given. Similarly, because the negation of the PUN is possible, Hume concludes that PUN is not a necessary truth that can be proven demonstratively.

Having argued that PUN is not based on demonstrative reasoning, if it is ultimately based on some kind of reasoning, Hume argues that the only other candidate is inductive reasoning. That is why Hume’s next question is whether we arrive at PUN though inductive reasoning. When we reason inductively, we make a generalization about an object or event form our past experience of similar objects or events. For example, based on our past experience of white
swans we make a generalization and claim that “All swans are white,” The formal structure of such an inductive reasoning would look as follows:

(P1) All the swans that have been observed so far were white. (empirical premise)

Conclusion: All swans are white.

While the structure of inductive reasoning is usually described as above, a closer examination reveals that the conclusion does not follow from the premise. Since the conclusion entails that swans we have not yet experienced are also white, we need to supplement the argument with another premise that would guarantee that our past experience is a reliable indicator of how our future experience of swans will be. We can make the jump from past experience to all experience only if we have good reason for assuming that the objects of our experience do not change their properties. i.e., nature’s course of action is uniform. Hence, the needed premise is none other than the PUN. A valid inference would look as follows:

(P1) All the particular swans that have been observed so far were white. (Empirical premise)

(P2) Nature is uniform (PUN).

(P3) Objects, of which we have had no experience, resemble those, of which we have had experience. (Follows from P2)

Conclusion: All swans are white.

Hence, we can make a valid inference about all swans only when we are justified to think that nature is uniform. Note that our belief in the PUN is based on inductive reasoning, which as we saw presupposes the PUN. Hence, there is circularity in our justification for the PUN as the reasoning that is supposed to support PUN already presupposes it (T, I.III.VI. p. 89).
Note that PUN grounds all inductive reasoning and therefore by undermining the validity of the PUN, Hume undermines the validity of inductive reasoning. By doing so, he argues against the possibility of empirically justifying general principles that refer to objects that are not yet experienced. That is why Hume’s argument against PUN shows that the CP cannot be empirically unjustified either. Hume’s underlying assumption seems to be that if the CP were an empirically justified principle, it would be equivalent to an empirical generalization from past experiences. But the only empirical justification we could provide for the principle that “every event must have a cause” would be the fact that every event we experienced in the past had a cause. In order for such inductive evidence to have a justificatory value, PUN must be established. Thus, Hume’s arguments against PUN invalidate all inductive evidence for any general statement.

Similarly, if we wanted to justify CP through reason based on experience, we would need to appeal to the principle of the uniformity of nature, which Hume shows is a principle that does not have any justification. In this regard, Hume’s arguments against the possibility of justifying PUN through inductive reasoning apply to CP as well. In fact, no truly universal, or as Kant calls it “strictly universal”, principle that refers to all objects (as opposed to the ones that have been observed objects or events) can be justified through experience.

Having argued that these principles lack both rational and empirical basis, Hume is, now, in a position to infer that we are not justified to make any knowledge claims about causal relations. As noted before, Hume assumes that all causal inferences, construed in the traditional sense, presuppose the knowledge of necessary connections among objects. Believing that he has exhausted all possible ways in which the causal principles could be justified, Hume concludes that the idea of necessary connection that has been considered as the essential mark of the
traditional conception of the idea of *causation* lacks any basis. For Hume, then, necessary connections between objects can neither be discovered through experience nor can be known through reason alone. Thus, the assumption that our causal inferences are based on the knowable necessary connections between events in the world has to be abandoned.

Yet, Hume needs to explain why we think that certain type of events necessarily follow certain other type of events. Hume’s analysis of our particular causal inferences reveals that we infer the existence of particular events from other similar events only after we have experienced the several instances of one type of objects constantly followed by other type of objects. Hume illustrates this point with the following example,

Thus we remember to have seen that species of object we call *flame*, and to have felt that species of sensation we call *heat*. We likewise call to mind their constant conjunction in all past instances. Without any farther ceremony, we call the one *cause* and the other *effect*, and infer the existence of one from that of the other. (T. I.III.VI. p. 87)

In other words, the main reason why we call one species or type of object the cause and the other effect is due to their constant conjunction in our past experiences. Here, Hume explains how we come to believe that events are causally connected. As he writes, “contiguity and succession are not sufficient to make us pronounce any two objects to be cause and effect, unless we perceive that these two relations are preserv’d in several instances” (T. I.III.VI. p. 87). Observing several instances of particular constantly conjoined events, in turn, leads to the belief that everything in nature is causally connected. As Hume puts it,

A peasant can give no better reason for the stopping of any clock or watch than to say, that commonly it does not go right: But an artizan easily perceives, that the same force in the spring or pendulum has always the same influence on the wheels; but fails of its usual effect, perhaps by reason of a grain of dust, which puts a stop to the whole movement. From the observation of several parallel instances, philosophers form a maxim, that the connexion betwixt all causes and effects is equally necessary, and that its seeming uncertainty in some instances proceeds from the secret opposition of contrary causes. (T. I.III.XII. p. 74)
Notice that the artisan or the philosopher, who perceives similar causal connections, believes in the necessity of causal relations, while the peasant simply because he is not as experienced, does not attribute such necessity among causally connected objects. Assuming that similar effects must have similar causes, the artisan infers that the failure of occurrence of the expected effect must be due to some change in the nature of the associated cause. Note that Hume is not concerned with the peasant or the vulgar who takes causal connections to be uncertain and contingent facts. Hume’s target, here, are people, such as artisans and philosophers, who claim that everything is necessarily connected to each other in accordance with various principles and that we can know the particular necessary connections among objects in the world. While these philosophers might think that they reach the universal conclusion through reasoning from past experience, i.e., inductive reasoning, as Hume explains it is not a valid form of reasoning.

Hume examines the legitimacy of the assumption that nature is governed by the vast variety of causal principles that can be known by us. Note that according to this assumption, what is postulated is not only that every event has some cause, but also that every event is governed by various causal principles. In order to be able to make causal inferences, one needs to presuppose that necessary connections among events are not arbitrary, but rather governed by certain principles.

D. Conclusion

So far, I focused on the two questions Hume raises in the Treatise. I argued that while the first question is about the justification of the necessity of CP, Hume’s second question is about the nature of our particular causal inferences that involve making an inference from causes to their effects that follows them necessarily. I argued further that if we have experiential evidence for CP, it must be based on our knowledge of particular causal relations. However, as Hume’s
analysis of our particular causal inferences reveals we are not justified in making causal inferences because all such inferences are based on either reasoning from experience or merely the product of imagination. Since, the latter is, for Hume, is not a reliable faculty, he focuses his attention on refuting the first.

As Hume argues, all reasoning from experience assume an unjustified principle, namely PUN. Thus, Hume’s critique of PUN undercuts the possibility of knowing particular causal relations. Since it was the only viable option left, after proving that neither experience nor analysis of the ideas can account for our idea of causal necessity, Hume shows that we cannot justify CP. In this respect, Hume’s critique of the CP and the PUN proves that we lack both empirical (through direct experience or indirectly through inductive reasoning) and rational (either intuitive or demonstrative) knowledge of necessary causal connections.

With these skeptical arguments Hume argues that we lack of both rational and experiential basis for some of the fundamental principles of metaphysics and science. In the next chapter, I will examine how Kant refers to Hume and the Humean problem. In light of our discussion of Hume’s problems of causation and induction, we will identify the particular problem to which Kant refers as the Humean problem and addresses in the Second Analogy.
CHAPTER IV: KANT’S CONCEPTION OF THE HUMEAN PROBLEM

A. Introduction

In the Preface of the Prolegomena to Any Future Metaphysics (henceforth, the Prolegomena), Kant claims that Hume’s attack on metaphysics had changed the fate of this science (4:257). Later in the same text, Kant writes: “the remembrance of David Hume was the very thing that many years ago first interrupted my dogmatic slumber and gave a completely different direction to my researches in the field of speculative philosophy” (4:260). In his novel philosophical project, Kant does not simply adopt Hume’s views. Instead he aims to provide a response to Hume’s attack and solve what he sometimes calls “the Humean problem.” In fact, Kant describes his magnus opus the Critique of Pure Reason (henceforth, the Critique) as “the elaboration of the Humean problem in its greatest possible amplification” (4:261) and claims to have succeeded in providing a solution to it (4:260f).

As is clear, Kant takes Hume’s attack or what he calls the “Humean problem” very seriously. What is not clear is which problem he has in mind. In the previous chapter we identified two distinct problems Hume has introduced in relation to causation, namely the problem of causation and the problem of induction, which undermine the validity of the Causal Principle (CP) and the Principle of the Uniformity of Nature (PUN) respectively. If by the Humean problem Kant means simply the “problem of causation,” then a satisfactory response to the Humean problem requires the demonstration that the CP is a necessary principle that is known a priori.

If, the Humean problem refers to both the “problem of causation” and the “problem of induction,” in order to provide a compelling solution, Kant would need to demonstrate both that every event is causally connected and that those causal relations constitute a uniform nature.
Kant scholars mostly agree also that Kant attempts to offer a solution to the Humean problem in the Second Analogy of Experience (henceforth the Second Analogy). As we explained in the first chapter, the disagreement on what the Second Analogy establishes with regard to the existence of empirical laws is partly due to a disagreement on the content of the Humean problem Kant aims to address. Consequently, knowing the nature of the Humean problem will aid us figuring out whether in the Second Analogy Kant establishes the existence of empirical laws.

One might worry that attempting to determine Kant’s objective in the Second Analogy without analyzing the argument itself would be a futile task. However, the reason why Kant scholars proposed many different and mutually incompatible reconstructions of the Second Analogy argument is due to the fact that neither the structure nor the premises of the argument by themselves are sufficient to illuminate Kant’s objective in the Second Analogy. That is why it is important to first consider Kant’s main goal based on what he says in other passages and texts. The present chapter, therefore, closely examines Kant’s understanding of Hume and the Humean problem. By doing so, I aim to identify what Kant means by the “Humean problem,” which in turn will help us determine Kant’s solution to it in the Second Analogy.

B. The Humean Problem vs. the Problem of Pure Reason

Since Kant describes the first Critique as “the elaboration of the Humean problem in its greatest possible amplification” (4:261), I first examine the general problem Kant aims to solve in the first Critique. Kant’s conception of the Humean problem becomes most clear when we examine the passages where Kant contrasts the Humean problem with the more general problem he attempts to solve in the entire Critique.

In his 1789 letter to K.L. Reinhold, Kant writes that “in the Critique the task is just this: to show which laws are objectively necessary and, how we are authorized to assume them valid for
the nature of things, that is, how they can possibly be synthetic and yet a priori." Similarly, at B19 Kant summarizes the main philosophical problem he aims to address as follows: “The real problem of pure reason is now contained in the question: How are synthetic judgments a priori possible?” (B19).

Kant believes that we do, in fact, know some synthetic judgments a priori. For instance, the propositions of pure mathematics and pure natural sciences, according to Kant, are both synthetic and known a priori (B15f). That is why the question of pure reason is “How are synthetic judgments a priori possible?” as opposed to “Are synthetic judgments a priori possible?” He then explains how such synthetic a priori knowledge is possible by analyzing the role and nature of our faculties of sensibility, understanding and reason in generating human experience.

Since Kant calls non-conceptual truths “synthetic” truths and believes that necessity is a secure indication of apriority, by “synthetic a priori” judgments, Kant simply refers to necessarily true judgments whose negation does not lead to contradiction. Since Kant thinks that “properly metaphysical judgments” are all synthetic a priori judgments (4:279), the “real problem of pure reason” is a problem that concerns the possibility of metaphysics. Therefore, the general problem the Critique aims to address can also be called “the problem of metaphysics.”

Kant believes that the status of metaphysics depends on explaining the possibility of synthetic and a priori judgments. By addressing this question, he wants to provide a secure grounding for metaphysical knowledge and save metaphysics from its bad reputation as “the battlefield of…endless controversies” so that it can attain the status of a “science” (Aviii).

As Kant writes in the Preface of the Metaphysical Foundations of Natural Science (MFNS), “Every doctrine that is supposed to be a system, that is, a whole of cognition ordered

according to principles, is called a science” (MFNS, [467]). All scientific knowledge, according to Kant, initially begins with mere groping about (Bvii). Both mathematics and physics, for Kant, are secure instances of scientific knowledge, and in his view, they have attained their scientific status through a revolution in the mode of thought (Bxi). Similarly, metaphysics, Kant argues, has so far been mere groping among mere concepts. For it to become science as opposed to merely “groping about”, one needs to show that metaphysics can be systematic body of knowledge. Hence, he wants to show both that synthetic a priori judgments are possible and he wants to provide a systematic account of those judgments. Kant’s main objective in the Critique, therefore, is to describe how we can have a priori knowledge of synthetic truths in a systematic way.

Since no one before him thought of the real problem of the pure reason, Kant claims that no one before him ever seek the solution for it (B19). While Hume came closest to understanding it, even he, according to Kant, failed to grasp the real problem of pure reason. For Kant, comprehending the universality of the real problem of pure reason is key to solving it as well. That is why he claims that Hume’s narrow focus on a particular metaphysical concept, to which Kant refers as “Hume’s problematic concept” prevented him from conceiving the real problem.² If Hume had managed to perceive the problem in its generality and had surveyed all possible a priori knowledge of the understanding in a systematic manner, Kant claims, he would have also been able to determine the proper boundaries of the understanding instead of completely undermining its capacity for a priori knowledge (A767/B795). In other words, Hume, Kant claims, did not formulate the problem fully but instead focused on merely a part of it, which in turn prevented him from seeing the correct solution to it (4:260). The question, therefore, is: What

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² Although Hume examines the origin of other metaphysical concepts, such as the concept of substance and personal identity in the Treatise, it seems that Kant did not have access to those parts of the Treatise.
is the nature of that specific problem Hume focused on? Kant describes the main question Hume focused on as follows:

The question was [...] whether it [the concept of cause] is thought through reason \textit{a priori}, and in this way has an inner truth independent of all experience, and hence also a much more widely extended use that is not limited merely to objects of experience: regarding this Hume awaited enlightenment. (4:259)

The particular question Hume was interested in, on Kant’s view, is whether the concept of causation is indeed an \textit{a priori} concept of reason (as some philosophers claimed) or merely an empirical concept that we derive from experience.

In the previous chapter, we identified two problems Hume introduced in his critical treatment of the concept of causation, namely the problem of causation and the problem of induction. As we saw, each of these problems questions the validity of a different principle. While the problem of causation undermines the justification of the CP, the problem of induction attacks the validity of the PUN. So, in light of what is discussed in the previous chapter we can revise our question as follows: Instead of asking the more general question of how synthetic \textit{a priori} judgments are possible, did Hume, on Kant’s view focus merely on the CP or on the PUN? In the next section, we will examine Kant’s references to Hume, which in turn will clarify that whether he means the problem of causation or the problem of induction when he refers to the Humean problem.

(i) The Humean Problem as a Problem about the Apriority and Necessity of the \textbf{Causal Principle}

According to Kant, Hume “stopped with the synthetic proposition of the connection of the effect with its cause (\textit{Principium causalitatis}), believing himself to have brought out that such an \textit{a priori} proposition is entirely impossible” (B20). As we saw in the previous chapter, in the \textit{Treatise} Hume demonstrates that one cannot know the validity of the CP merely through the
analysis of the concepts of cause and event (T, I.III.III. p. 47-8). If we put it in Kantian terms, Hume demonstrates that CP is not an analytic (or explicative) judgment, in which the predicate is contained in the subject, rather it is a synthetic (or ampliative) judgment, which means that the predicate says something new about the subject (4:266-67).

Kant seems to be aware of this argument because on Kant’s view after Hume realizes that the validity of the CP cannot be proven through conceptual analysis. In the Prolegomena, Kant expresses his agreement with Hume on this point as follows: “[Hume]…indisputably proved that it is wholly impossible for reason to think such a [necessary] connection a priori and from concepts” (4:257). In other words, Hume, according to Kant, successfully demonstrated that reason cannot justify that there are necessary connections among distinct objects merely by analyzing the concepts.

Based on his observation that the CP is not analytic, however, Hume falsely inferred that it cannot be known a priori. That is, Hume did not entertain the possibility that we can know synthetic (or non-conceptual) truths a priori. As Kant writes, “[Hume] could not explain at all how it is possible for the understanding to think of concepts that in themselves are not combined in the understanding as still necessarily combined in the object” (B127). Here, Kant claims that Hume did not entertain the possibility that logically independent concepts can be connected necessarily in a way that such connection corresponds not only to a feature of our thought but also to a feature of objects. That is, Hume could not explain how two distinct objects can be connected necessarily. Consequently, he had no choice but to infer that the idea of necessary connection must originate from habit. Even though both Hume and Kant grant that the idea of causation contains the idea of necessary connection they disagree on the origin of such connection.
According to Kant, by claiming that the idea of necessary connection originates from our experience of constant association of events, Hume denies any “objectivity” of the idea of causal necessity. Due to our experience of objects that are constantly conjoined we project necessity on the world, which may or may not correspond to real relations among objects. The idea of necessary connection, in Hume’s account, originates from habit of connecting frequently conjoined ideas in the imagination. Thus, we cannot claim that there are in fact necessary relations that govern external objects. In other words, the idea of necessary connection does not have objective validity because it originates from our natural tendencies that do not have any legitimate relation to the objective world.

Despite his admiration for Hume, Kant does not find Hume’s own empirical account of causation satisfying because such empirical account of causation, in Kant’s view, reduces causal necessity to mere “subjective necessity” and causal relations to mere fictions. In the Prolegomena, Kant contrasts “subjective necessity” that results from experience and habit with “objective necessity” as follows:

[H]ume concluded that reason completely and fully deceives herself with this concept, falsely taking it for her own child, when it is really nothing but a bastard of the imagination, which, impregnated by experience, and having brought certain representations under the law of association, passes off the resulting subjective necessity (i.e., habit) for an objective necessity (from insight). (emphasis mine, 4:258)

Kant repeatedly denounces Hume’s account of causation for it takes the idea of necessary connection to be a product of our imagination. Imagination is the faculty that is thought to produce ideas freely according to its own laws of association. By tracing the origin of the idea of necessary connection in the imagination, Hume, in Kant’s view, reduces causal necessity to mere propensity of the mind, and consequently undermines its objective validity. That is why in the
Prolegomena Kant asserts that Hume reduced the causal connections to “bare fictions” of the imagination (4: 258).

Given that Kant finds Hume’s account of causal necessity unsatisfactory, it is not surprising that he also finds his account of the necessity of the CP misguided. Kant claims that in Hume’s view the CP is merely comparatively universal and subjectively necessary (B5; A760/B788). Hume’s denial of the apriority of the CP, according to Kant, led him to deny the necessity of the CP. As Kant puts it, on Hume’s account “the authority of this law [the CP] is not constituted in the least by its necessity, but only by its merely general usefulness in the course of experience and a subjective necessity arising therefrom, which he called custom” (A760/B788).

So far, we saw that Kant clearly distinguishes the particular problem Hume was interested in from the general problem he aims to address in the Critique. He criticizes Hume for focusing on a particular synthetic principle, namely the CP. On Kant’s view, instead of asking the more “determinate and universal” question about the possibility of “synthetic” a priori knowledge, Hume questioned whether a particular synthetic principle can be known a priori. Based on its synthetic nature, Hume, on Kant’s view, falsely concluded that the CP is an a posteriori principle, which lacks objective necessity and validity.

Contra Hume, Kant maintains that the CP is a synthetic principle, which is both the strictly universal and objectively necessary. Given that experience cannot account for these features (A2; B4), the CP on Kant’s view must be known a priori. It is, therefore, clear that Kant’s disagreement with Hume concerns the status of the CP, Kant does not seem to be interested in the validity of the PUN nor does he mention the validity our particular causal inferences in relation to Hume. In fact, Kant seems to be in agreement with Hume that inductive inferences cannot provide us knowledge of the things of which we cannot have direct experience.
Instead of trying to justify the principle of the uniformity of nature, which grounds all inductive inferences from observed instances to unobserved instances, Kant appears to simply assume that we cannot be sure about the uniformity of nature. That is why he thinks that induction inferences or inferences from experience can at most give us judgments with what Kant calls “comparative universality.” As he explains in the B Introduction: “Experience teaches us, to be sure, that something is constituted thus and so, but not that it could not be otherwise. […] Experience never gives its judgments true or strict but only assumed and comparative universality (through induction), so properly it must be said: as far as we have yet perceived, there is no exception to this or that rule” (B3).

Note that both Hume and Kant agree that inferences from experience, namely inductive inferences from perceived instances to unperceived instances are unjustified. That is why Kant limits what we can learn through inductive inferences to the things of which we have experience and qualifies them by saying that “as far as we have yet perceived, there is no exception to this or that rule” (B3). In this regard, he carefully distinguishes the universality of the inductive judgments, i.e., judgments about all perceived objects from the universality of metaphysical judgments, namely judgments about all objects without exception.

This in turn suggests that while the general problem Kant wants to solve in the *Critique* concerns the origin and justification of all metaphysical concepts and principles, the Humean problem concerns the origin and justification of the concept of causation and the CP. It seems, therefore, that when referring to the “Humean problem” Kant has Hume’s problem of causation, as opposed to the problem of induction in mind.

While this inference seems to be supported by the textual evidence there is one apparent problem with it. Next, we will discuss why some scholars resist the view that the problem of
causation is the Humean problem that woke Kant from his dogmatic slumber and lead to Kant’s critical thought.

(ii) A problem with identifying the Humean problem with the problem of causation

In our analysis of the problems of causation and induction in Chapter III, we focused mostly on distinguishing these two problems by identifying the different principles they attack and understanding how they relate to each other. That is, Chapter III was not concerned with a comparative study that identifies which problem is most apparent in which text. Scholars mostly agree that the problem of causation appears most explicitly only in the *Treatise*. For instance, in the *Treatise*, Hume is clearly concerned with the origin of the idea of causation. He explicitly writes: “we must consider the idea of causation, and see from what origin it is deriv’d” (Treatise, I.III.II). Also, he argues against the necessity of the CP, only in the *Treatise* and asks “For what reason we pronounce it necessary, that everything whose existence has a beginning, shou’d also have a cause?” (T, I.III.III. p. 78)

Contra the *Treatise*, Hume in the *Enquiry* raises the question of “how we arrive at the knowledge of cause and effect” by analyzing our particular causal inferences, which involve inferring the existence of a particular thing (fire) based on our experience of another thing (smoke) (*EHU*, Sect.4. Part1) As Hume demonstrates, such particular causal inferences assume the uniformity of nature, which as he argues cannot be justified either deductively or inductively. In the *Enquiry*, the principle with which Hume is clearly interested in, therefore, is the PUN, which, according to Hume, is at the foundation of all inferences from experience.

If by the Humean problem Kant means the problem of causation, on the other hand, it means that Kant is inspired by Hume’s discussion of causation in the *Treatise*. This, however, seems problematic because even though Hume’s *Treatise* was published in 1739, it was not fully
translated into German until 1790-91. Thus, scholars agree that Kant did not have direct access to it. It seems more likely that the Humean problem to which Kant responds is the problem of induction in the *Enquiry* because a German translation of Hume's *Enquiry* (published in 1748) appeared in 1755, and scholars agree that Kant must have read this translation by the mid-1760s.

Besides, in “Kant’s Conception of ‘Hume’s Problem’,” Manfred Kuehn points out that Johann Georg Sulzer was the editor of the second volume of *Vermischte Schrifftte*, in which the German translation of Hume’s *Enquiry* was published in 1755. Regarding Hume’s *Enquiry* Sulzer writes that “the publication of this work will interrupt their [German philosophers’] leisurly slumber and give them a new occupation” (p. 180). In the *Prolegomena*, Kant asserts “the remembrance of David Hume was the very thing that many years ago first interrupted my dogmatic slumber” (4:260). Given the similarity of expression in these two passages, it is clear that in the *Prolegomena* Kant recalls Sulzer’s passage about Hume’s *Enquiry*. It seems, therefore, the Humean problem, by which Kant was inspired and wants to respond in the Second Analogy, is the problem Hume focuses in the *Enquiry*, namely the problem of induction.

While Kant might not have direct access to Hume’s arguments in the *Treatise*, it seems that he learned about them in different ways. For instance, Kant have read the concluding section of Book I of the Treatise, which contains a summary of Hume's skepticism because it was translated into German by Johann Georg Hamann and published in a local paper, Konigsberger Zeitung, in July, 1771.

Also, in the concluding section of Book I of the *Treatise*, Hume writes as follows: “[T]he impossibility of amending or correcting these faculties, reduces me almost to despair, and makes

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3. Kuehn also provides Sulzer’s quote in German, which reads as follows: “Ich hoffe, dass die Bcannmtmachung dieses Werkes sie [die deutschen Philosophen] aus ihrer müssigen Ruhe ein wenig aufwecken, und ihnen eine neue Thatigkeit geben werde. Dieses ist einer von den Gründen, die mich zur Herausgebung dieses Werkes bewogen haben” (Kuehn, p. 180, fn 14).
me resolve to perish on the barren rock, on which I am at present, rather than venture myself upon that boundless ocean” (T, I.IV.VII, p. 139). In the *Prolegomena*, Kant refers to this part and writes that Hume is an inspiring skeptic, who “deposited his ship on the beach (of skepticism) for safekeeping, where it could then lie and rot” (4:262). It is clear that here Kant reiterates Hume’s passage in the *Treatise*.

Most important source for Kant, however, seems to be the German translation of James Beattie’s *Essay on Nature and Immutability of Truth* (henceforth Essay), which was originally published in 1770 and the German translation appeared in 1772. While Beattie criticizes Hume’s skepticism, he provides extensive quotes from Book I of the *Treatise*. We know that Kant was aware of Beattie’s work because in the *Prolegomena* he mentions Beattie by name twice and in both cases he argues that Beattie like many others failed to understand Hume and the Humean problem accurately (4:258-59).

Moreover, as Robert P. Wolff points out, in his *Essay* Beattie deals with three aspects of Hume’s philosophy two of which Kant could not have read in the *Enquiry*, namely Hume’s attack on the Causal Principle and his discussion of personal identity (1960, p. 119-20). The most important quotations from Beattie’s work, as Wolff asserts, are the passages where Hume criticizes the necessity of the Causal Principle. As we saw in the previous chapter, Hume demonstrates that we can imagine events without causes, which in turn entails that the ideas (or concepts) of “cause” and “effect” are logically independent. Since the idea of cause and effect are logically independent, Hume argues that one cannot demonstrate the truth and necessity of the CP through deductive arguments alone (*Treatise*, I.III.III).

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As Wolff points out, Kant’s argument in the B Introduction of the *Critique* mirrors Hume’s argument in the *Treatise*. Kant explains why the CP is not a conceptual truth as follows:

Take the proposition: “Everything that happens has its cause.” In the concept of something that happens, I think, to be sure, of an existence that was preceded by a time, etc., and from which analytic judgments can be drawn. But the concept of a cause lies entirely outside that concept, and indicates something different than the concept of what happens in general, and is therefore not contained in the latter representation at all.\(^5\) (A9/B13)

Here Kant explicitly states that no matter how thoroughly we analyze the content of the concept of “what happens,” we will not find the concept of “cause” in it. According to Kant, the Causal Principle is not an analytic principle that can be known through the analysis of the concepts of cause and event because these concepts are logically distinct. So, for Kant, the Causal Principle is a synthetic principle, meaning that the subject and predicate of the principle are logically distinct and independent.

Also, as Manfred Kuehn points out, Kant could have had an indirect access to the content of the *Treatise* via his colleagues and friends. As Kuehn writes,

> Since Hamann and Kant were friends and discussed philosophy at times, it is very likely that Kant learned about other aspects of the Treatise [which are not translated] from Hamann. [...] Kraus, another good friend of Kant and Hamann [...] knew, according to Hamann, the *Treatise* ‘by heart.’ Kant and Kraus regularly undertook long walks and frequently dined together. Kant could have learned everything about the contents of the Treatise from Kraus, his colleague and former student. (p. 185, fn. 42)

In light of all this evidence, we can conclude that even if Kant did not have direct access to the *Treatise*, he knew about Hume’s *Treatise* account of causation through various sources. Thus, the Humean problem Kant aims to address and claims to have solved in the first *Critique*...
(in particular, in the Second Analogy), can very well be the problem of causation discussed most explicitly in the *Treatise*.

(iii) **The proper sphere of the concept of causation and the Causal Principle**

Although the Humean problem—as Kant understands it—seems to be a problem concerning the origin of the concept of causation, once the origin of this concept is determined accurately, Kant believes, one would also be in a position to determine the conditions under which it can be employed properly (B23). As he writes in the *Prolegomena*, “The discussion [by Hume] was only about the origin of this concept, not about its indispensability in use; if the former were only discovered, the conditions of its use and the sphere in which it can be valid would already be given (4:259). In other words, the origin of the concept of causation determines the sphere in which we are justified to employ it.

In fact, by questioning the *a priori* origin or the concept of causation, Kant believes that Hume was ultimately interested in determining whether we are justified in using the concept of causation in certain metaphysical arguments. As Kant asserts, Hume questioned whether the concept of cause “has an inner truth independent of all experience, and hence also a much more widely extended use that is not limited merely to objects of experience” (4:259) In other words, the Humean question was whether the concept of cause gets its validity from experience or it is valid independently of particular experience, which in turn would determine whether it can be used to talk about things that are not possible objects of experience, such as God and soul.

If, for instance, the concept of causation were an empirical concept, as Hume eventually argues, we would be justified in employing that concept only to talk about objects of experience. This in turn means that arguments in which the concept of cause is employed in order to prove the existence of God and soul would become illegitimate. As Manfred Kuehn points out, James
Beattie, who is a defender of common sense philosophy, criticizes Hume’s skepticism about the *a priori* origin of the concept of causation and the corresponding principle, i.e., the CP because he thinks that this concept and principle provides the “foundation” of the argument that God is the creator of the universe. The underlying reason why in his *Essay* Beattie is not happy with Hume’s treatment of the concept of causation, according to Kuehn, is because he wants to save what he views as “the most important argument that ever employed human reason” (Kuehn, p. 188).

Since Hume maintains that the concept of causation and the CP originate from experience they should not be employed in metaphysical discussions about objects that are beyond the sphere of experience. In this respect, Hume’s empirical account of causation leads to skepticism concerning the employment of this particular concept of principle in certain metaphysical arguments.

Kant is aware that Hume’s arguments against the apriority of the concept of causation and the Causal Principle when generalized to include other similar metaphysical concepts and principles imply that reason is incapable of knowing any kind of *a priori* truths about the world, i.e., truths that are valid beyond the realm of experience. As Kant puts it, “from the incapacity of our reason to make a use of this principle [i.e., the Causal Principle] that goes beyond all experience, he [Hume] inferred the nullity of all pretensions of reason in general to go beyond the empirical” (A760/B788). Thus, Kant knows that a comprehensive response to Hume would require demonstrating not only the *a priori* origin of the metaphysical concepts, but also their proper sphere of application.

According to Kant, both Locke and Hume thought that the concept of causation and the CP are derived from experience. However, while Locke *inconsistently* made knowledge claims that go beyond the bounds of experience, for Kant, Hume *consistently* inferred that the proper
sphere of the concept and principle is limited to the sphere of experience (B127). As we will see later on, for Kant, the concept of cause is a necessary condition for making experience of objects possible for us. In other words, it is an *a priori* condition of experience. Since the concept of cause is an *a priori* condition of human experience, it would be unjust to employ it when we talk about things that are not possible objects of experience. Similarly, we would be unjustified to think that there are, in fact, causes and effects outside the realm of experience.

Applying metaphysical concepts and principles beyond their proper sphere of application would not only be illegitimate but it also leads to contradictory judgments, —or what Kant calls— the antinomies of reason (B 453). Existence of the antinomies, on the other hand, leads to skepticism about reason’s capacity to know certain metaphysical truths. That is, antinomies undermine the authority of reason and thereby lead to skepticism about the possibility of metaphysics (B24). In fact, while in the *Prolegomena* Kant claims that Hume woke him from his dogmatic slumber, in his September 21, 1798 letter to Christian Garve, Kant writes that it was the antinomies that aroused him from his dogmatic slumber:

> It was not the investigation of the existence of God, immortality, and so on, but rather the antinomy of pure reason – ‘The world has a beginning; it has no beginning, and so on, right up to the 4\textsuperscript{th} *[sic]*: There is freedom in man, vs. there is no freedom, only the necessity of nature’ - that is what first aroused me from my dogmatic slumber and drove me to the critique of reason itself, in order to resolve the scandal of ostensible contradiction of reason with itself.\(^6\) (12:258, p. 552)

Note that Kant is interested in solving a problem concerning reason’s capacity to know metaphysical truths. Even though his assertion here appears to be in conflict with his remarks in the *Prolegomena*, we can now see that the Humean problem and the existence of antinomies are closely related issues. First of all, both the Humean problem and the existence of antinomies

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makes Kant to become aware of the significance of determining the proper use of the metaphysical concepts, and lead to the realization that the Humean problem cannot be addressed simply by proving the *a priori* origin of the concept of causation. One must also determine if it is legitimate to apply that concept to things that are not possible objects of experience. Moreover, both the antinomies and the Humean problem undermine the authority of reason, and by doing so they lead to skepticism about metaphysics in general.

C. The Humean Problem as a Threat Against Metaphysics

Hume’s attack on the *a priori* origin of the concept of causation poses a significant threat against the use of other similarly significant metaphysical concepts beyond the empirical sphere. Although Kant believes that Hume focused merely on the origin and justification of the concept of causation and the Causal Principle, he is aware of the destructive consequences of Hume’s arguments for the possibility of metaphysical knowledge in general. In particular, Hume’s empirical account of causation suggests that we are capable of mistaking empirical concepts and principles for *a priori* concepts and principles:

[Hume] held all of its [reason’s] supposedly *a priori* principles' to be merely imagined, and found that they are nothing but a custom arising from experience and its laws, thus are merely empirical, i.e., intrinsically contingent rules, to which we ascribe a supposed necessity and universality. (A765/B793)

Thus, by arguing that we made a mistake about a very important metaphysical concept, Hume indirectly demonstrates our fallibility and lack of justification for using those central concepts and principles in metaphysical debates. In this respect, Hume’s critique of the *a priori* origin of the particular concept of causation and the Causal Principle is a critique of metaphysics that makes use of many such concepts and principles. In response to Hume, Kant argues that Hume’s empirical account of causation leads to unacceptable and “absurd” consequences.
D. Kant’s Reaction to Hume’s Skepticism

According to Kant, “Hume is perhaps the most ingenious of all skeptics” (A764/B792). Although he was impressed, Kant was not convinced by this “ingenious skeptic.” This, however, is not due to any inconsistencies or fallacies in Hume’s thought, but due to Kant’s conviction that Hume’s skepticism conflict with certain “facts,” namely that we have knowledge of pure mathematics and pure natural science. In other words, Kant argues that Hume’s denial of the possibility of causal knowledge leads to skepticism about all synthetic a priori truths, which conflicts with what Kant considers to be a fact, i.e., we possess knowledge of pure mathematics and pure natural science.

According to Kant, if Hume is right, we have to accept that there could be no pure mathematics, which, Kant claims, certainly contains synthetic a priori propositions (B20). Although Kant is confident that mathematics is synthetic a priori. In fact, Kant is so sure of the status of mathematics, he claims that if Hume had realized the consequences of his argument, he would not be satisfied with skepticism, which Kant describes as “assertion from which his sound understanding would surely have protected him” (B20).

Kant contrasts the status of metaphysics with the status of mathematics and natural sciences, and argues that any position that conflicts with these secure sciences should be rejected. In this regard, it is clear that Kant also assumes that both mathematics and natural science have secure a priori foundation and that they are actual examples of systematic body of knowledge. For Kant, then, since any attempt at empirically deriving the metaphysical concepts and principles would contradict with already well-grounded scientific knowledge, such as our knowledge of mathematics and natural sciences, such skeptical position is refuted by facts.
It is now clear that Kant main argument against Hume’s account of causation does not consist of pointing out the significant harm Hume’s views can cause about the possibility of metaphysics or showing the internal inconsistencies, but rather it consist of pointing out a consequence which conflicts with a “fact” that Kant thinks even Hume would not deny. Although Kant is on board with Hume with regard to putting an end to the endless disputes about the things that are not possible objects of experience, he denies that skepticism is the ultimate stop of all philosophical inquiries.

Skepticism, for Kant, can only be a necessary step toward recognizing the need for examination and recognition of the nature and true boundaries of pure reason. In the Doctrine of Method, Kant argues that determination of the true limits of pure reason requires a three-step-procedure (A761/B789). The first step, which Kant describes as the childhood of reason, is dogmatic. In the B Preface, Kant defines dogmatism as “the presumption of getting on solely with pure cognition from (philosophical) concepts according to principles, […] without first inquiring in what way and by what right it has obtained them (Bxxxv). In other words, for Kant, if one is uncritical of reason’s concepts and principles and takes them at face value, that person has a dogmatic attitude towards reason’s capacity. Kant thinks that Christian Wolff was the greatest among all dogmatic philosophers, who insisted on the clear determination of the concepts and strictness in the proofs. However, under the influence of the prevalent dogmatic tendencies he failed to see the need for a critique of pure reason itself (B xxxvi). That is why he did not have the right kind of attitude towards reason.

The second step, in the process of attaining the right approach towards reason, consists of being critical of these facta of reason and questioning the origin and the legitimacy of these principles (A760/B788). A skeptic, according to Kant, approaches the dogmatic principles of the
reason critically. In this respect, Kant thinks that skeptical attitude is directed towards dogmatists in particular. Similarly, Kant perceives Humean skepticism to be attacking the dogmatic philosophers. By questioning the facta of reason (chiefly the principle of causality and the concept of causation) as opposed to taking them to be necessarily true, Hume proceeds in the right direction because he nullifies reason’s capacity to make sound inferences beyond the empirical sphere (A760/B788).

According to Kant, this second step, although necessary, does not complete the work because it merely limits reason. As Kant, famously writes, “skepticism is a resting place for human reason, which can reflect upon its dogmatic peregrination and make a survey of the region in which it finds itself in order to be able to choose its path in the future with greater certainty, but it is not a dwelling-place for permanent residence” (A 761/B789). While Kant appreciates certain benefits of Hume’s critical approach, he thinks that Hume’s views cause serious damage to philosophy by undermining our belief in the reliability of reason’s capacity to know. That is why Kant refers to Hume’s skeptical procedure as the censorship of reason, which should be replaced with a positive attitude towards reason. Therefore, Kant believes that another step should be taken in order to secure the status of philosophy.

The third step that consists of the critique of reason is required to attain adult and mature reason. In contrast with the second step, what is evaluated in this step is the faculty of reason itself, rather than the particular principles or concepts of reason (A761/B789). Only with this critical step, Kant claims, reason can determine its boundaries and “secure its rightful claims while dismissing all its groundless pretentions” (A xi). In this regard, unlike Hume, Kant undertakes an inquiry concerning the capacity of our cognitive faculties, namely sensibility, understanding and reason that results with a systematic survey of all of our concepts and
principles. This in turn makes him to realize that the concept of causation is not the only metaphysical concept that demands *a priori* justification, and similarly the Causal Principle is not the only metaphysical principle that needs to be justified.

As Kant writes in the *Prolegomena*, Hume is an inspiring skeptic, who “deposited his ship on the beach (of skepticism) for safekeeping, where it could then lie and rot” (*Prolegomena*, 4:262). Unsatisfied with Hume’s skeptical conclusions, Kant writes, “whereas it is important to me to give it a pilot, who, provided with complete sea-charts and a compass, might safely navigate the ship wherever seems good to him, following sound principles of the helmsman’s art drawn from a knowledge of the globe” (4:262).

The reason why Kant does not think that skepticism is a viable philosophical position, then, is that it conflicts with the possibility of mathematical and scientific knowledge. Since, for Kant, the latter already signifies secure instances of systematic knowledge, he argues that skepticism cannot be the ultimate resting place for philosophy.

**E. Features of A Proper Solution to the Humean Problem**

Having established the nature of the Humean problem and its effect on Kant’s thought, let us now focus on its solution. Given that the Humean problem is a problem about the *a priori* origin and justification of the concept of causation and the necessity of the CP, it seems that for a compelling solution Kant should demonstrate both the *a priori* validity and objective necessity of the CP. Moreover, the solution to the Humean problem (and the problem of antinomies) should determine the domain in which *a priori* concepts and principles are valid. In this respect, both the recollection of the Hume’s treatment of causation or “the Humean problem” (and the problem concerning antinomies of reason) inspire Kant to solve the more general “problem of metaphysics” in the *Critique*. That is why in the *Critique* Kant aims demonstrate reason’s ability
to know synthetic *a priori* concepts and principles in a systematic way and determine the proper boundaries of those *a priori* concepts and principles.

Having been inspired by Hume’s analysis of a particular metaphysical concept and principle, Kant adopts a systematic and much more comprehensive inquiry, which in turn makes him realize that there are many metaphysical concepts that originate from the understanding *a priori* (*Prolegomena*, 4:260). Hence, unlike Hume, Kant, in the *Critique*, undertakes a systematic inquiry of all of our faculties and by doing so he establishes the apriority of the metaphysical concepts and principles, but also determines the sphere in which they can be employed justly.

By arguing that we are justified to use metaphysical concepts and principles only in the realm of the objects of possible experience, Kant shows that the antinomies are not indicative of the unreliability of our rational capacities. Rather they are indicative of the need to determine the proper boundaries of the application of the metaphysical concepts principles.

**F. Conclusion**

In this chapter, I argued that contra Hume, who views CP as a contingent empirical generalization, Kant maintains that the CP is both strictly universal and objectively necessary two features that experience cannot give its judgments. On the other hand, Kant never explicitly formulates the PUN in the context of the Humean problem nor does he seem to disagree with Hume’s account of induction. In fact, Kant seems to be in complete agreement with Hume on the status of inductive inferences for both of them agree that induction cannot give us judgments that are valid for all objects of a particular kind without exception. Thus, the Humean problem Kant aims to address in the Second Analogy is the problem of causation, which is a problem about the *a priori* origin, objective validity and the proper use of the CP.
Having identified the particular problem the Second Analogy aims to address, in the next chapter, I will examine whether Kant successfully addresses the problem of causation. In order to provide a satisfactory solution to the problem of causation, Kant needs to establish that the CP is an *a priori* principle and determine its proper domain of application. As will be clear, in order address all these requirements for a satisfactory solution of the Humean problem Kant utilizes a novel method of argumentation. In the next chapter, I will first explain Kant’s method of argumentation and then provide a reconstruction of Kant’s Second Analogy argument where he responds to the Humean problem.

Although identifying Kant’s conception of the Humean problem reveals us Kant’s intentions, it does not inform us of what the argument actually achieves. Unless we closely examine the argument itself, we cannot completely rule out the strong reading of the Second Analogy, according to which the Second Analogy addresses Hume’s problem of induction as well as the problem of causation. Even though Kant does not explicitly express his intention of solving the problem of induction by providing an *a priori* justification for the PUN, it might turn out that the Second Analogy has sufficient resources to do so.
CHAPTER V: WHAT DOES THE SECOND ANALOGY ESTABLISH?

A. **Introduction**

In the previous chapter, we identified Kant’s conception of the Humean problem as the problem concerning the *a priori* origin and objective validity of the Causal Principle (CP) and the proper domain to which it applies. Having determined the nature of Kant’s conception of the Humean problem, in what follows we will examine how Kant addresses the Humean problem in the *Second Analogy of Experience* (henceforth, the Second Analogy). As will be clear, in the Second Analogy Kant argues that the CP is a necessary condition for the possibility of experience. By doing so, he establishes the *a priori* origin, objective validity and the proper domain of the concept of causation and provides an *a priori* justification for the CP.

I divide this chapter into three parts. In the first part, namely Part B, I provide the relevant philosophical background to the main argument of the Second Analogy. In particular, I focus on Kant’s general method of argumentation, which is also known as the “transcendental argument.” In the second part, i.e., Part C, I closely examine Kant’s Second Analogy. Before I present a step-by-step reconstruction of the argument, I present some philosophical background to Kant’s argument by explaining some of the key terms that Kant employs in his argument, such as “event” [Ereignis], “change” [Wechsel], and “alteration” [Veränderung]. As will be clear, understanding Kant’s method of argumentation and identifying the correct meanings of those terms is essential to understanding the premises of Kant's argument accurately. After I clarify the conceptual and methodological tools Kant employs, I present in the second part a step-by-step reconstruction of the main argument of the Second Analogy. As will be clear, in the Second Analogy Kant achieves his goal and successfully addresses the Humean problem of causation by demonstrating the *a priori* origin and objective necessity of the Causal Principle and limiting its
proper sphere of application to possible objects of experience. Finally, in the third and the last part of the chapter, i.e., Part D, I examine whether Kant in the Second Analogy has the resources to respond to Hume’s problem of induction, which as we saw in Chapter III, is a problem about the validity of our belief in the uniformity of nature. I argue that while the Second Analogy proves the existence of particular causal laws, the existence of such laws does not guarantee the uniformity of nature.

B. **Philosophical Background to the Second Analogy Argument**

(i) **Kant’s transcendental method**

As we saw in the previous chapter, Kant was not satisfied with the accounts of causal knowledge presented by his predecessors. While Hume’s empirical account of causation reduced causal necessity to what Kant calls mere “subjective necessity” (B5), rationalist account of causation falsely identified causal necessity with conceptual or “analytic necessity” (B13). In other words, both the rationalist and empiricist accounts failed to provide an accurate account of causal necessity. This failure, according to Kant, is mainly due to adopting wrong methods of argumentation, which rely either completely on conceptual analysis or completely on experience. While the former accounts for how we know analytic *a priori* judgments, the latter empirical (or psychological) derivation can only account for how we know synthetic *a posteriori* judgments. In other words, the methods adopted by his predecessors cannot account for metaphysical truths, which, according to Kant, are synthetic *a priori* (4:279).

Since the Causal Principle (CP), which states, “Everything that happens has its cause,” is also a synthetic judgment (B13) that can be known *a priori* (B5), Kant realizes that he cannot appeal to the methods employed by the rationalists and the empiricists to justify our knowledge of this synthetic *a priori* principle.
As I explained in Chapter IV, Hume plays a crucial role in Kant’s recognition that the Causal Principle is a synthetic principle. Against the rationalists, who take the Causal Principle to be an analytic principle, Hume forcefully argues against the analyticity of the Causal Principle. Hume’s own empirical account of the Causal Principle, on the other hand, helps Kant to see that if the Causal Principle is known through experience, as Hume argues, one has to admit it is merely a useful empirical generalization that does not have any rational basis. Having been trained in the rationalist tradition, Kant cannot accept the skeptical Humean conclusion regarding the status of a very important metaphysical principle. Instead, he works on finding a way to ground the synthetic metaphysical principles a priori.

By using a novel method of argumentation in the Critique of Pure Reason (henceforth, the first Critique), Kant aims to demonstrate that the a priori knowledge of such synthetic principles is possible. What is more, Kant believes that with his new method he can present not only the a priori grounding, but also the exact boundaries and the systematic structure of all metaphysical knowledge. In the B Preface, Kant describes the essential role of his method for his task in the first Critique as follows:

Now the concern of this critique of pure speculative reason consists in that attempt to transform the accepted procedure of metaphysics, undertaking an entire revolution according to the example of the geometers and natural scientists. It is a treatise on the method, not a system of the science itself; but it catalogs the entire outline of the science of metaphysics, both in respect of its boundaries and in respect of its entire internal structure (Bxxii, emphasis mine).

By describing the first Critique as a “treatise on method,” Kant emphasizes the significance of using the right method in achieving his main objective, namely to provide an a priori justification for metaphysical concepts and their corresponding principles. In order to achieve this objective, Kant claims that metaphysics needs a revolutionary approach similar to the one adopted by mathematicians and scientists.
Having been convinced that neither *experience* nor purely *conceptual analysis* alone can accomplish the task at hand, Kant employs a third kind of method, which he claims to be a “synthetic method” (A14/B28). As he writes in the *Prolegomena*, in contrast with the analytic (or regressive) method, Kant claims that the synthetic method is “progressive” (4:277*). The reason why Kant calls his method in the *Critique* “progressive” is that unlike the analytic method of the *Prolegomena*, which starts with assuming the validity of certain metaphysical principles as given, in the first *Critique* Kant proves the validity of those principles as he proceeds. That is, since Kant proves the validity of the metaphysical principles as he moves forward, the method enables him make *progress* in metaphysics.

In contrast with the *analytic or regressive method* adopted by the dogmatic philosophers, who, according to Kant, assume the validity of certain metaphysical principles (4:277f) and build a theory based on them (A763/B791), Kant’s novel method of argumentation does not presuppose the validity of any particular metaphysical principle or concept. For Kant is aware that such an attempt would be an easy target for a skeptic like Hume, who would be critical towards any such foundational principles. Instead of analyzing certain metaphysical principles, Kant rather analyzes the conditions under which human “experience” is possible. That is why some scholars claim that Kant undertakes an *analysis of experience*.¹ For instance, in his article “Kant’s Analysis of Experience” H. J. Paton employs the term “analysis of experience” to refer to Kant’s method of discovering the *a priori* elements of human knowledge by analyzing “ordinary human experience” (p. 195-96).

Following Paton, I shall argue that, what scholars usually call, Kant’s “transcendental argument” is based on the assumption that through analysis of our ordinary human experience

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¹ For further details, see Paton’s “Kant’s Analysis of Experience” in the *Proceedings of the Aristotelian Society*, New Series, Vol. 36 (1935 - 1936), (pp. 187-206).
we can discover necessary a priori conditions for such experience, which are, according to Kant, identical to the a priori elements of knowledge about the world.

In order to understand Kant’s method in terms of “analysis of experience”, however, we need to get clear on what kind of “experience” Kant is analyzing. By experience one can mean experience of individual objects, such as my experience of the computer screen or one can refer to different kinds of human experience, namely experiencing events, objects, etc. Moreover, by experience one can mean a thick sense of experience that is true (or veridical) experience, to which some Kant scholars refer as “scientific experience,” or one can mean a thin sense of experience that amounts to nothing more than sense perception. Second, given Kant’s interest in providing a systematic account of the possibility of synthetic a priori knowledge (Bxvi), it seems unlikely, if not impossible, that an analysis of experience, which appears to be quite diverse and complicated (either particular daily experience of different objects, different kinds of experience or just veridical experience), can lead to such systematic account of metaphysical knowledge.

While we have many diverse experiences, one would agree that all healthy human beings have the same cognitive faculties. That is why instead of analyzing the particular products of our faculties—as dogmatists (Bxxxv) and skeptics (A760/B788) have done—Kant prefers to analyze the respective roles our cognitive faculties play in constituting “experience”. In order to understand how Kant’s method work, therefore, first we need to get clear on what Kant means by “experience,” and then identify the particular roles Kant attributes to our cognitive faculties.

One might think that we have experience when we have unstructured sensations through our sense organs. In the first Critique, Kant does not seem to be consistent in his use of the term ‘experience’. While in the Analogies, for instance, he seems to identify experience with the cognition of objects, in the Introduction to the second edition, he appears to identify experience
with the sensation of objects. As he writes “All our cognition begins with experience; for how else should the cognitive faculty be awakened into exercise if not through objects that stimulate our senses […]. But although all our cognition commences with experience, yet it does not on that account all arise from experience” (B1) Here it is clear that Kant distinguishes the cognition of objects from the experience of objects. Later at A 288, Kant writes, “All our cognition starts from the senses, goes from there to understanding, and ends with reason” which seem to mirror the passage in the Introduction and therefore confirms the view that Kant sometimes uses the thin sense of experience. It is clear that Kant distinguishes that thin sense of experience from a thicker conception of experience he employs in the Analogies. As he writes, “experience is a cognition of objects through perception” (B219). It is clear that Kant uses ‘experience’ to mean “empirical cognition” which can be understood as empirical knowledge of objects. Having experience, therefore, amounts more than just having sensations [Empfindung] or perceptions [Wahrnehmung], but rather involves “judgments” about objects based on those sensations and perceptions we receive.

Kant defines sensation [Empfindung] as “the effect of an object on the capacity for representation, insofar as we are affected by it” (A20/B34). In this regard, sensation concerns the change in the subject. Kant describes sensation as the matter of appearances, which is given to us a posteriori. The form of appearance, on the other hand, must lie in the mind a priori (A20/B34). In contrast with sensation [Empfindung], perception [Wahrnehmung] is combined with consciousness (A120). Unlike experience or cognition of objects, on the other hand, perceptions are representations, which not yet subject to the understanding’s determination.

If experience, for Kant, consists of judgments composed of concepts, the analysis of experience, therefore, would mean analysis of judgments and concepts that constitute
experience. As Kant explains, “[t]he analysis [Analysis] of experience contains, first, its analysis [Zergleiderung] insofar as judgments are in it; second, beyond the a posteriori concepts also a priori concepts” (A66/B91).

Note, however, that Kant’s analysis of concepts differs significantly from the analysis that dogmatic philosophers perform on concepts. Contra dogmatic philosophers, who analyze the content of certain concepts, Kant analyzes the conditions under which these concepts are first possible (A65-6/B90-1). Moreover, instead of clarifying the content of the concepts, Kant’s analysis aims to isolate and identify the underlying a priori elements that make the knowledge of empirical elements possible in the first place. This in turn, as Kant argues, depends on accurately distinguishing the elements that are given to our senses from the elements that come from our faculties. Kant writes the following notes on the margins of the first edition of the first Critique:

The problem is: How is experience possible? 1. What does the understanding do in judgments in general? 2. What do the senses do in empirical judgments? 3. In empirical cognition, what does the understanding, applied to the representations of the senses, do in order to bring forth a cognition of objects [Objecte] (A66/B91*)?

Note that Kant is interested in how human experience is possible, as opposed to how human experience is actual. His emphasis on “the possibility of experience” is due to his interest in identifying merely the formal or general conditions that correspond to a priori conditions of experience, as opposed to the particular and subjective features that make our experience actual. In this respect, Kant is not concerned with the elements that provide the content of experience, as he thinks that this empirical and contingent part is the subject of empirical sciences, not metaphysics. Also, instead of merely clarifying the content of the concepts that constitute our judgments, and consequently, our experience of objects, Kant’s method aims to individuate and identify the a priori elements that make our judgments and empirical concepts possible.
According to Graham Bird, Kant takes philosophy to be concerned mainly with conceptual relations, which can reveal both analytic and synthetic judgments. Thus, Bird prefers to describe Kant’s method in terms of an analysis of certain concepts that we use in (ordinary and scientific) experience. Accordingly, Kant identifies the \textit{a priori} conditions that make certain important metaphysical concepts possible. By doing so, Bird claims that Kant also identifies synthetic (non-analytic) dependence relations between concepts in experience.\textsuperscript{2} By describing Kant’s method in terms of discovering the background conditions of concepts or identifying synthetic conceptual dependences, Bird draws from Kant’s emphasis on the fact that philosophy proceeds “from concepts” (4:279, A713/B741, A724/B752, A734/B762). Philosophy can proceed from concepts either dogmatically by analyzing the content of the concepts (B23), or synthetically. As Bird points out, Kant adopts the latter strategy, which consists of analyzing the conditions that make certain concepts possible. In compliance with Bird’s reading, Kant describes the Causal Principle as follows, “That everything that happens has a cause cannot at all be inferred from the concept of what happens in general; rather, it is this principle that shows how one can first get a determinate experiential concept of what happens” (A301/B357). Here, Kant suggests that the Causal Principle (or every event has a cause) cannot be inferred from (the analysis of) the concept of ‘event’, rather it expresses the \textit{a priori} condition of how we first get the empirical concept ‘event.’

Kant claims that his novel method or argumentation, which is designed to show how metaphysics as a science is possible, is similar to the method that scientists adopt. As he writes, “This method, imitated from the method of those who study nature, thus consists in this: to seek the elements of pure reason” (Bxviii). More specifically, Kant associates his method with the

\textsuperscript{2} See Bird’s discussion of Kant’s method in his books \textit{Kant’s Theory of Knowledge}, particularly in chapter 10 and \textit{The Revolutionary Kant}, chapters, 19 and 29.
method that chemists use: “This experiment of pure reason has much in common with what the chemists sometimes call the experiment of reduction, or more generally the synthetic procedure” (Bxxif). Since Kant thinks that the procedure he employs is similar to the “synthetic procedure” adopted by chemists, Kant refers to method of the first Critique as “synthetic method” (A14/B28). Like chemists, who identify certain components of compound materials through their essential properties and isolate them from the other elements, Kant aims to identify and isolate the a priori components of experience. In order to abstract the unwanted components away, Kant appeals to certain criteria that enable him to distinguish different kinds of elements.

In the Introduction to the first Critique, Kant carefully establishes the secure criteria of a priori elements of experience, namely “necessity” and “strict universality” (B3), which according to Kant, cannot be known empirically (B6). While Kant takes necessity and strict universality to be secure indications of apriority, Hume denies this assumption. In fact, Hume presents a comprehensive account of why these are not secure marks of apriority by explaining how experience and habit produce certain feelings of determination and certainty that produce our ideas of necessity and universality. Kant’s response to Hume, therefore, cannot be that Hume merely failed to realize that necessity implies apriority. As I explained in Chapter III, according to Kant, if we accept Hume’s empirical explanation, we have no choice but deny both the possibility of metaphysical knowledge, —and most importantly—knowledge of mathematics and natural sciences. This, however, is unacceptable for Kant because Kant maintains that mathematics and science have already proved themselves as reliable scientific knowledge. Thus, Kant’s response to Hume consists of coming up with a theory that explains how we can have a priori knowledge about the world is possible. Immediately after he introduces these criteria,  

3. Also, in the Preface of the Prolegomena, Kant writes: “Here then is such a plan subsequent to the completed work, which now can be laid out according to the analytic method, whereas the work itself absolutely had to be composed according to the synthetic method” (4:263).
Kant shows how he employs the synthetic procedure in isolating *a priori* components in our experience in accordance with the previously established criteria as follows:

Gradually remove from your experiential concept of a **body** everything that is empirical in it - the color, the hardness or softness, the weight, even the impenetrability - there still remains the **space** that was occupied by the body (which has now entirely disappeared), and you cannot leave that out. Likewise, if you remove from your empirical concept of every object, whether corporeal or incorporeal, all those properties of which experience teaches you, you could still not take from it that by means of which you think of it as a substance or as dependent on a substance (even though this concept contains more determination than that of an object in general). Thus, convinced by the necessity with which this concept presses itself on you, you must concede that it has its seat in your faculty of cognition *a priori*. (B5-6)

Kant identifies the *a priori* component in our experience, namely the element that we put in experience by removing all the empirical elements from the concepts of “body” and “object” until he reaches those that carry the secure criteria of *apriority*. After he abstracts away the empirical from the *a priori* components, which respectively constitute the matter and the form of experience, Kant further distinguishes the different kinds of *a priori* elements. Kant further distinguishes the *a priori* form of our faculty of sensibility from the *a priori* form of our faculty of understanding. Since the previous criteria cannot help us distinguish the two *a priori* forms, Kant introduces a set of different criteria to distinguish the two distinct kinds of *a priori* elements, namely *a priori* forms of intuition and the *a priori* concepts of the understanding.

Kant explains how he uses this method in the Transcendental Aesthetic to identify and isolate the *a priori* form of our faculty of sensibility as follows:

In the transcendental aesthetic we will therefore first **isolate** sensibility by separating off everything that the understanding thinks through its concepts, so that nothing but empirical intuition remains. Second, we will then detach from the latter everything that belongs to sensation, so that nothing remains except pure intuition and the mere form of appearances, which is the only thing that sensibility can make available *a priori*. In this investigation it will be found that there are two pure forms of sensible intuition as principles of *a priori* cognition, namely
space and time, with the assessment of which we will now be concerned. (A22/B36)

Note that Kant first distinguishes the elements of sensibility from the elements of understanding and then he further distinguishes the *a priori* forms of the sensibility from the empirical elements that are given to us through our faculty of sensibility.

After using the synthetic method in the Transcendental Aesthetic to identify the *a priori* forms of intuition (see A26/B42 for space and B49 for time), in the Transcendental Deduction Kant employs the same method to determine the *a priori* forms of the understanding, namely the *a priori* concepts or the *categories* (A77/B101). The following passage from the A Deduction suggests that Kant employs the same method of abstraction in order to further distinguish different kinds of *a priori* elements that make experience possible, namely the *a priori* forms of intuition and the *a priori* concepts of the understanding:

[I]f one wants to know how pure concepts of the understanding are possible, one must inquire what are the *a priori* conditions on which the possibility of experience depends and that ground it even if one abstracts from everything empirical in the appearances. A concept that expresses this formal and objective condition of experience universally and sufficiently would be called a pure concept of the understanding. (A95-6)

This passage suggests that we know the possibility of the pure concepts of the understanding by investigating the *a priori* conditions of experience, and this investigation involves abstracting away everything empirical in experience until one reaches the formal and universally valid objective conditions of experience. In the *Transcendental Deduction*, Kant briefly demonstrates how he reaches the *a priori* concept of causation by using this synthetic method of abstraction:

If (in another example) I perceive the freezing of water, I apprehend two states (of fluidity and solidity) as ones standing in a relation of time to each other. But in time, on which I ground the appearance as *inner intuition*, I represent necessary synthetic unity of the manifold, without which that relation could not be determinately given in an intuition (with regard to the temporal sequence). (B162-63)
Here, Kant analyzes our experience of an event, such as the freezing of water. His analysis reveals that there is *necessary* unity between the different states that constitute the event in question, namely the state of solidity succeeds the state of fluidity in time, and this succession of states seems to be “determined.” To put it differently, the different states of water seem to be temporally ordered and unified in a certain way. Having discovered this, Kant seeks the condition that makes this “synthetic unity” of different states that make the experience of a single event possible.

But now this synthetic unity, as the *a priori* condition under which I combine the manifold of an *intuition in general*, if I abstract from the constant form of my inner intuition, time, is the category of cause, through which, if I apply it to my sensibility, I determine everything that happens in time in general as far as its relation is concerned. (B163)

Since necessity is a secure indication of an *a priori* component in our experience, Kant focuses his attention to this necessary unity of different states of the water. As he further abstracts the *a priori* form of his inner intuition, namely the time he discovers the *a priori* condition under which the intuition is combined to constitute our experience of that particular event, i.e., the freezing of water. As Kant explains later, this *a priori* condition is the category (or the *a priori* concept) of cause, which determines the temporal order of two different states constituting an event in a necessary manner. So, from an analysis of his experience of an event, Kant identifies the *a priori* components that enable him to infer an *a priori* condition for experiencing events in general.

One might think that by demonstrating the apriority of the concept of causation Kant would sufficiently respond to the Humean Problem. Presenting the dialectic between Kant and Hume in this way oversimplifies the matters and it hardly does any justice to the strength of Hume’s position. In order to provide a compelling solution to the Humean problem, Kant should
prove not only that the concept of causation is an *a priori* concept, but also that it has *objective validity*, namely it relates to objects of experience. Proving that we have certain *a priori* concepts would not satisfy a skeptic for he can simply deny that those *a priori* concepts do not inform us about the world we experience even though they originate from human mind because they could be mere products of our imagination.

As we saw in the previous chapter, Kant’s main disagreement with Hume, after all, was not that Hume failed to account for the idea of causal necessity, as Kant is aware that Hume presents an account of the idea of causal necessity in terms of habit or subjective determination (B5). According to Kant, Hume simply failed to account for the *objectivity* of causal necessity. Therefore, if Kant intends to respond to Hume, he would need to show that his account of causal necessity does not suffer from the drawback that Hume’s account of causal necessity does.

Hume is not the only philosopher who did not think that the concept of causation lacks objective validity. According to Kant, Leibniz holds that the concept of causation has an *a priori* origin that governs our thought, and yet he denies that it has any objective validity. In Kant’s view, Leibniz takes the concept of causation to be an innate concept that is implanted in our minds by God (B167). Even though there are not causal relations between objects, Leibniz, according to Kant, thinks that we are so constituted that we cannot help but think them in causal relations (B168). In Kant’s eyes, Leibniz’s account of causation is not different from Hume’s account because in both cases the concept of causation lacks objective validity and causal necessity is reduced to mere subjective necessity (B168).  

4. While Kant does not refer to Leibniz by name, from his description of the “preformation system” at B167-8, according to which *a priori* concepts of the understanding are mere “subjective predispositions for thinking implanted in us along with our existence by our author in such a way that their use would agree exactly with the laws of nature along which experience runs,” it would be safe to infer that he refers to Leibniz’s system of the pre-established harmony.
Unless we show that the *a priori* concepts of the understanding necessarily apply to objects of experience Kant claims that we cannot infer that they are objectively valid. That is why in order to prove that the concept of causation and the CP are *objectively valid*, meaning that the idea of causation (in particular, the idea of causal necessity) is not merely a function of our psychological predispositions but rather corresponds to objects in the world, Kant needs to demonstrate the necessary relationship between those *a priori* concepts and the objects we experience.

Both in the first *Critique* and the *Prolegomena*, Kant contrasts “subjective necessity” that results from habit with “objective necessity” that derives from the understanding. As explained in the previous chapter, Hume, according to Kant, takes the idea of necessary connection to be a product of the faculty of imagination, which produces ideas freely according to its own laws of association as opposed to the laws of the understanding. By tracing the origin of the idea of necessary connection in the imagination, Hume, in Kant’s view, reduced causal necessity to mere propensity of the mind and denied any factual or rational basis for the idea of causation. That is why, in the *Prolegomena*, Kant criticizes Hume for reducing the causal connections to “bare fictions” of the imagination and falsely identifying causal necessity with “subjective necessity” (i.e., habit) (*Critique*, B5, B92b; *Prolegomena*, 4:258).

In order to close the gap between our subjective contributions of our mind and the objective world Kant argues that the *a priori* concepts are necessary conditions that make our experience of objects possible. By doing so, he could explain how we can have *a priori* knowledge that does not merely clarify our thoughts, such as analytic truths but also informs us about the world.
That is why after he determines the apriority of the concept of causation and the CP, Kant proceeds to argue for their objective validity. In order to show its objective validity he argues that the concept of causation plays a necessary role in making our experience of events possible, which in turn tells us that events themselves stand under this concept: “Thus the apprehension in such an occurrence, hence the occurrence itself, as far as possible perception is concerned, stands under the concept of the relation of effects and causes, and so in all other cases” (B163). By showing the necessary role the concept of causation plays in our experience, Kant describes the necessary role the a priori elements play in the construction of objects of possible experience. In other words, by making human experience possible, a priori concepts of the understanding acquire objective validity because they also make objects themselves possible. As Kant puts it, “The conditions of the possibility of experience in general are at the same time conditions of the possibility of objects of experience, and on this account have objective validity in a synthetic judgment a priori” (A158/B197).

Note that Kant redefines “objectivity” in relation to human experience, and thereby opens the way for the possibility of having a priori knowledge about objects by abstracting away all the empirical elements and “synthesizing” the a priori conditions of human experience. In this respect, Kant undermines the assumption that objectivity entails mind-independence.

So far, we saw that Kant first argues that the concept of causation and the CP must have a priori origin because they entail absolute necessity and strict universality (B5) two secure criteria for apriority. Then, Kant goes on to argue that they have objective validity because they play necessary role in the possibility of experience, i.e., the possibility of objects of experience, and thereby acquire objective validity. As we shall see, in our reconstruction of the Second

5. I take it that by occurrence [Begrenheit] Kant means an event [Ereignis], namely a determinate temporally ordered states of object.
Analogy argument, Kant employs a “transcendental argument” to show that the CP is a necessary condition for the possibility of experience. Robert Stern, describes the general structure of transcendental arguments as follows:

**P1:** A certain supposedly indisputable fact: Y (Categorical Premise).

**P2:** For Y to be possible, X must be the case (Hypothetical/Transcendental Premise).

**Conclusion:** Therefore, X (p. 6).

As is clear, transcendental arguments start with a presumably undisputed factual premise. The second premise consists of a particular necessary condition that makes the undisputed premise true. Once the necessary condition is identified and argued for, it follows that if we accept that the first premise, we must also agree that the necessary condition described in the second premise holds.

Given that Kant’s general strategy involves identifying the necessary conditions that make experience possible. Thus, he starts his transcendental proof with the undisputed premise that even a skeptic like Hume would agree with, namely that we have experience. We have also determined that in the Analogies Kant uses the thick sense of experience. As he states in the second edition formulation of the General Principle of Analogies, “experience is possible only through the representation of a necessary connection of perceptions (B218). In other words, experience requires not only the juxtaposition of perceptions but also their necessary connection.

Having explained the general structure of Kant’s transcendental arguments, we can infer that in the Second Analogy, where he aims to prove the *a priori* origin and objective validity of the CP, Kant argues that experience, which requires the representation of a necessary connection

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6. See the first chapter of his book *Transcendental Arguments and Skepticism: Answering the Question of Justification.* For other examples of Kant’s transcendental arguments, see Stern’s *Transcendental Arguments: Problems and Prospects.*
of perceptions, is possible only if the CP is valid. Next, we will examine Kant’s Second Analogy argument and determine what Kant’s argument establishes. Before I present a detailed reconstruction of Kant’s Second Analogy argument, where Kant argues that the CP is a necessary condition that makes experience of events possible, a few preliminary remarks concerning different formulations of it and the meaning of some of the key terms and distinctions in the argument are in order.

(ii) **Two formulations of the Causal Principle and clarification of important terms**

One obvious point about the text of the Second Analogy is that Kant aims to demonstrate the apriority of the Second Analogy Principle. Kant changes the formulation of the Second Analogy Principle in the first and the second editions. In the first edition, Kant presents the principle as follows: “Everything that happens (begins to be) presupposes something which it follows in accordance with a rule” (A189). In the second edition, however, he rephrases the principle in the following way: “All alterations occur in accordance with the law of the connection of cause and effect” (B323). Although Kant's reformulation of the principle might seem unimportant, Kant’s reformulation helps us understand what his transcendental proof in the Second Analogy establishes.

First of all, in the second edition Kant replaces the term “everything that happens” with “all alteration”. By doing so, he aims to limit the sphere to which the concept of cause applies. In traditional metaphysics, both creation and annihilation of objects were considered to be events. That is, both creation and annihilation of objects were considered to be events that can and must have some causal explanation. For Kant, on the other hand, substances do not perish and pop into existence. As Kant argues in the First Analogy, substances merely change their

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7. In the Doctrine of Method, Kant writes that the proof of a synthetic proposition “shows that experience itself, hence the object of experience, would be impossible without such a [necessary] connection” (A783/B811).
determination or their accident. All arising or perishing, for Kant, is nothing but the alteration of persisting substances, which are the ultimate persisting subjects of all change (A205/B250). Since things do not really “begin to be” as he proved in the First Analogy, Kant asserts that the principle of “nothing comes from nothing” follows from the Principle of Persistence of substance (A185/B228). For the present purposes, I will not talk about Kant’s argument in the First Analogy of Experience.  

For Kant, neither creation nor annihilation, which involves alteration from non-existence to existence and vice versa is an event. For they entail change not only in the accident of the substances but also change in the substance itself (A206/B251). While changes in the states of the substances occur in time, changes in the substances themselves do not seem to occur in time. That is why by focusing on the alteration [Veränderung] in the state of objects in the second edition it seems that Kant aims to exclude events that do not happen in time, which in turn limits the application of the concept of causation to the things that happen in time. Having said that, in the Second Analogy Kant uses the terms change [Wechsel], event [Ereignis] and occurrence [Begebenheit] interchangeably with alteration [Veränderung] to refer to changes in the states of the objects: “All change (succession) of appearances is only alteration (B 233). As Kant puts it in the First Analogy, alteration [Veränderung] “is a way of existing that succeeds another way of existing of the very same object. Hence everything that is altered is lasting, and only its state changes” (A187/B230). According to Kant, then, all alteration involves the

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8. According to Paul Guyer, Kant’s point in the First Analogy is that in order to have empirical knowledge of objective changes we must assume the existence of some sort of persisting object or as he calls it, “the ultimate survivors and therefore substrata of all change” even if we might never find out what that substance is (1987, p. 108).

9. In his Metaphysic Lectures, Kant explains why creation is not an event as follows “Events take place in time. But time is in the world. The beginning of nature is only the condition under which the events in the world can happen. Accordingly creation is not an event, but rather is only that through which the events <eventus> happen. It is thus a supernatural action <aaio supernaturalis>, but does not belong to the course of the world it belongs to the supernatural <supernatural;>, which interrupts the course of nature” (28:217).
succession of two different, or as Kant puts it, two opposed states of the same substance. For instance, when we experience an alteration, let’s say, the evaporation of water we experience the gaseous state of water following the liquid state. So, our perception of this event in question is necessarily constituted by two states of water in a particular determinate temporal order, namely the liquid state preceding the gaseous state.

As we shall see, Kant’s Second Analogy argument is based on an analysis of our experience of changes in the objects based on our experience of sequences of different representations about a single object. In this respect, the argument does not directly address issues concerning event sequences that concern interaction of multiple objects such as the hitting of one billiard ball against another billiard ball and thereby making the latter move. Kant rather focuses his attention to the experience of events that concern the change in the states of a single object –or what Graham Bird calls– “simple events.”

In his book *Kant’s Theory of Knowledge*, Graham Bird makes the distinction between “simple events” and “complex events”. In contrast with complex events that consist of multiple objects interacting with each other, alterations or changes refer to simple events involving changes in single objects. According to Bird, by the term “alteration” Kant means simple event. That is why in Bird’s view, in the Second Analogy argument Kant focuses on the experience of simple events (1973, p. 156-57). Similarly, in his book *The Revolutionary Kant*, Bird writes that “The popular version places Kant in line with empiricists who speak of causal relations between events, whereas for Kant it is relations within events, between states of an object, which provide the fundamental locus for causal relations” (2006, p. 456). Like Bird, Paul Guyer and Henry Allison argue that Kant’s focus on alteration in the states of objects shows that Kant was
primarily interested in the changes of the “same object,” such as evaporation of water or the motion of the ship. 10

In contrast with Bird, Allison and Guyer, others such as Graciela De Pierris and Michael Friedman argue that the concept of causation connects different events. As they write in their Stanford Encyclopedia entry “For Kant, it is only the a priori concept of causality (requiring a necessary rule of connection between preceding and succeeding events) which can then transform a merely subjective temporal sequence into an objective one.” 11

I agree with Bird, Guyer and Allison on the point that Kant’s transcendental argument consists of identifying the necessary preconditions of our experience of alteration [Veränderung], which corresponds to change in the same object. In this regard, the argument is concerned with the possibility of simple events. This, however, does not mean that the Second Analogy argument does not have any implications for the causal interaction of different objects. As we shall see, Kant argues for the thesis that all alteration occurs in accordance with the law of cause and effect, meaning that all alteration must have some cause that precedes it. Even though we cannot know what the cause of any particular alteration is, we can know a priori that it has some cause.

While getting clear on what Kant means by “alteration” is important, it is not the most controversial term in the Second Analogy principle. Once again, in the first edition, Kantformulates the Second Analogy principle as follows: “Everything that happens (begins to be) presupposes something which follows in accordance with a rule.” At first glance, the Second Analogy principle is significantly similar to Hume’s formulation of the Causal Principle, which

10. See Guyer’s Kant and the Claims of Knowledge, (p. 260) and Allison’s Kant’s Transcendental Idealism: An Interpretation and Defense (2004), (p. 254).
states, “whatever begins to exist, must have a cause of existence” or to put it simply “every event must have a cause” (T, I.III.III. p. 78). Despite the similarity between these two formulations, Kant’s formulation states that causal relations occur in accordance with “a rule.” Here Kant does not spell out what kind of “a rule” governs the events.

As we mentioned in Chapter II, there are two popular interpretations of the term rule leading to two very different readings of the Second Analogy. By “a rule,” Kant may mean either a particular determination of the CP, namely a particular causal law, as Friedman and De Pierris argue, or Kant might refer to the CP itself, as Buchdahl argues.

If by “a rule” Kant means “a particular causal law,” we can infer that in the Second Analogy Kant proves the existence of particular causal laws because the principle he attempts to prove would state, everything that happens (begins to be) presupposes something which it follows in accordance with a particular casual law. De Pierris and Friedman argue that Kant provides an a priori justification not only for the CP, but also for the empirical lawfulness of nature. As they assert in the Stanford Encyclopedia of Philosophy (henceforth, SEP): “Kant maintains that, when one event follows another in virtue of a causal relation, it must always follow “in accordance with a rule” (A193/B238). Moreover, the “rule” to which Kant is here referring is not the general causal principle, but rather a particular law connecting a given cause to a given effect which is itself strictly universal and necessary (A193/B238–239)” On their reading, therefore, the Second Analogy proves not only that every event must have a cause, but also that every event has a cause from which it must follow in accordance with a particular causal law.

In contrast with Friedman, Gerd Buchdahl and Henry Allison argue that by “a rule” Kant means “an a priori law of the understanding” which makes experience of events first possible.
As Buchdahl puts it, the Second Analogy argument does not entail the “empirical lawlikeness” of nature (1965, p. 207). That is, knowing that every event has some cause does not mean that we are also a priori justified to believe that there are particular causal laws: “the general [causal] principle cannot be intended to furnish a justification for the assumption even of [empirical] lawlikeness in general, (let alone the existence of special laws)” (1965, p. 200). As Buchdahl writes, “when Kant says that the analogies give us causality, […] we must not take it that the general causal principle provides a justificational basis for such [particular causal] laws, or for their ‘lawlikeness in general’” (my emphasis, 1965, p. 207)

According to Buchdahl, the existence of particular laws is not guaranteed by the understanding, rather reason aims to discover those laws through its regulative principles. On his reading, the CP rather provides a “guide-line” and necessary conceptual and linguistic tools for our empirical investigations. In “Causality, Causal Laws and Scientific Theory,” Buchdahl writes as follows:

[W]e have shown that the statement of the principle of causality can be proved a priori, in the sense that the conception of an objective world entails the thought of the members of that world, regarded as appearances, being subject to a rule. Let us then use this principle, not considered as a support for the specifications of the particular rules which experience may come to discover, but as guide-line for the search of principles; where having this guide-line does not mean having guarantee that any putative principle is a law, but rather, that it gives us the language in terms of which to carry on our procedure. (1965, p. 197)

Following Buchdahl, Allison argues that the CP allows us to experience contingent events and “this relatively modest claim, which I take constitutes the heart of Kant’s answer to Hume, does not entail any further claims about the empirical lawlikeness of nature” (1996, p. 90). As Allison puts it: “[T]he Analogies […] perform (and are intended to perform) only the minimal transcendental function of securing an objective temporal order of contingent
occurrences, while the actual projection of an empirically lawlike order of nature is seen as the work of reason or reflective judgment” (1996, p. 80).

The second edition formulation of the Second Analogy Principle seems to support Buchdahl/Allison reading because Kant there reformulates the principle and changes the term “rule” with “the law of cause and effect.” Hence, the second edition principle reads as follows, “All alterations occur in accordance with the law of the connection of cause and effect” (B232). Although Kant's qualification in the second edition formulation seems to be in favor of Allison’s reading, there are strong reasons to think that by claiming that all causal relations occur in accordance with “a rule” Kant means that all causal relations are subject to some particular causal law.

While Kant’s expressions in the Second Analogy are ambiguous, and therefore, do not help us settle the issue, it is not clear why Kant would want the Second Analogy principle to make a reference to itself. If by “rule” Kant means the Second Analogy principle itself, then his objective is to demonstrate that every event must have a cause from which it follows in accordance with this principle, which — in terms of content— seems to be equivalent to saying that every event must have a cause. Given that throughout the Second Analogy Kant repeatedly refers to the “rule,” Kant seems to think that this plays an important role in his argument. Hence, it seems more plausible to think that by “rule” Kant refers to some particular causal law. Kant would then demonstrate not only that all events are subject to the CP, which is an a priori principle of understanding, but also that all events are governed by particular causal laws, which, according to Kant, are particular determinations of the a priori principles of understanding (A128).

12. See Allison’s *Idealism and Freedom*, especially, Ch. 6 entitled “Causality and causal law in Kant: A critique of Michael Friedman.”
Moreover, Kant in the *Prolegomena* appears to be referring to the Second Analogy Principle when he writes, “everything that happens always previously is determined by a cause according to constant laws” (4:295). Here, Kant explicitly refers to “constant laws” as opposed to a single law, which suggests that causal relations are governed by particular causal laws, as opposed to the CP.

Also, Kant explicitly asserts that while the ordering of empirical laws in a systematic manner is the work of *reason*, connecting the multiple representations of experience and subsuming the manifold of appearances under particular causal laws is a function of the *understanding*:

The understanding constitutes an object for reason, just as sensibility does for the understanding. To make systematic the unity of all possible empirical actions of the understanding is a business of reason, just as the understanding connects the manifold of appearances through concepts and brings it under empirical laws. (A664/B692)

That is, even though we cannot derive particular causal laws from the *a priori* concepts of the understanding alone (as we need experience), Kant argues that it is the understanding’s job to bring all objects of experience under particular causal laws.\(^\text{13}\) This in turn suggests that understanding must first guarantee the existence of particular empirical causal laws. Thus, the strong reading of the Second Analogy, according to which being subject to causality, for Kant, entails being subject to particular causal laws is further supported by passages beyond the Second Analogy.

Since the Second Analogy explicitly asserts that causality entails rule-governed necessary connections, and having established that by “rule,” Kant means “particular causal law,” we can now infer that the Second Analogy Principle argument, if sound, proves the existence of particular casual laws. In this regard, the strong reading is right to argue that being

\(^{13}\) For Kant’s emphasis on the role of experience see the passages at A127-8 and A216/B263.
subject to causality entails being subject to particular causal laws. In light of all these preliminary remarks, let us now closely examine Kant’s transcendental proof for the CP in the Second Analogy.

C. Kant’s Second Analogy Argument

The first task for Kant is to identify the necessary and strictly universal component in our experience. More precisely, Kant seeks the *a priori* components in our experience of alterations or events. That is why Kant first attempts to identify the necessity in our experience of events that cannot be given in experience, and therefore must have an *a priori* origin.

Kant argues that when we experience an event, we judge that one state precedes the other in a determinate way. For instance, when we experience and event, such as freezing of water, we judge that those perceptual states constituting the event follow each other in an irreversible order (e.g. solid state of water following the liquid state of water) (B234). Kant illustrates the role of necessary connections among perceptual states in our experience of events, with an example of an event of a ship moving downstream. As he writes:

> If in the case of an appearance that contains a happening I call the preceding state of perception A and the following one B, then B can only follow A in apprehension, but the perception A cannot follow but only precede B. E.g., I see a ship driven downstream. My perception of its position downstream follows the perception of its position upstream, and it is impossible that in the apprehension of this appearance the ship should first be perceived downstream and afterwards upstream. The order in the sequence of the perceptions in apprehension is therefore here determined, and the apprehension is bound to it. (A192/B237)

As Kant explains, when we experience an event, such as the downstream motion of a ship, our experience contains a determinate order of perceptions that constitute the event. That is, the perception of the ship downstream follows the perception of it upstream. Note, however, that these perceptions do not merely follow each other. As Kant points out, when we experience an event, we judge the perceptual states to be connected to each other in a fixed and irreversible
way. In other words, we judge the temporal order of perceptions to be determinate and necessary. As Graham Bird argues, when we change the temporal order of the perceptual states constituting an event, we would be referring to a completely different event, in this case the upstream motion of a ship (1962, p. 155).\textsuperscript{14} Hence, Kant’s analysis of our experience of events leads to the idea of determinate or necessary temporal order of perceptions.

In order to show that this necessary order of states is a feature of our experience of events, Kant compares the experience of events with the experience of persisting objects. As he argues, when we experience an object, such as a house, the order of the perceptions is not determined. As Kant writes,

> In the previous example of a house my perceptions could have begun at its rooftop and ended at the ground, but could also have begun below and ended above; likewise I could have apprehended the manifold of empirical intuition from the right or from the left. In the series of these perceptions there was therefore no determinate order that made it necessary when I had to begin in the apprehension in order to combine the manifold empirically. (A192-93/B237-38)

In other words, even though the representations of the house are put in successive order by imagination, the order of these perceptions is not necessary or fixed, but rather completely arbitrary, meaning that the temporal order of our perceptions does not determine what we perceive. For instance, we could perceive the rooftop of the house first and the bottom of it later or vice versa and in either case we would experience the same object, namely the house. In contrast with experiencing events, therefore, when we experience a persisting object we judge that the temporal order of perceptual states to be indeterminate and arbitrary.

According to Kant, when we experience an event the order of perceptions is determined in accordance with a rule: “[T]his rule is always to be found in the perception of that which happens, and it makes the order of perceptions that follow one another (in the apprehension of

\textsuperscript{14} According to Bird, our analysis of an event logically entails that there is a determinate temporal order of states (1962, p. 155).
this appearance) necessary” (A193/B238). As we have argued before, this rule to which Kant refers is a particular causal law, and it is responsible from ordering perceptual states in a necessary manner. In order to show the objective validity of this rule, Kant explains how it plays a role in transforming mere “apprehension” to “appearance” of objects, i.e., to experience:

[A]ppearance, in contradistinction to the representations of apprehension, can thereby only be represented as the object that is distinct from them if it stands under a rule that distinguishes it from every other apprehension, and makes one way of combining the manifold necessary. That in the appearance which contains the condition of this necessary rule of apprehension is the object. 15 (A191/B236)

Kant argues that our perceptions are distinguished from other perceptions, forming the object of experience only when they are necessarily connected to each other. Their necessary unity, on the other hand, cannot be explained unless we assume that they stand under a rule, namely a particular causal law. As for Kant, an object is “nothing more than a sum of these (necessarily connected) representations” (A191/B236). That is why the arbitrary succession of perceptions, which do not stand under particular causal laws, do not designate any object and judged to be mere “subjective succession,” while necessarily ordered succession of perceptual states is judged to be corresponding to succession in the objection, and thereby signify “objective succession” (A193/B238).

Only by assuming the existence of some cause or determinant, which determines the order of perceptions in accordance with a particular causal law, can we account for our experience of events. What is significant here is that we must assume that there is “some” condition (or an event) that determines the order of representations in accordance with a particular causal law. Kant does not think that we can know the determining condition or cause

15. At B162* Kant contrasts the “synthesis of apprehension” with the “synthesis of apperception” and argues that while the former is empirical synthesis of the imagination the latter is the intellectual synthesis of the understanding that involves the use of the a priori concepts.
of the event we are experiencing a priori. What we know is rather that there must be a condition or cause “in general.” As he writes:

[S]ince there is still something that follows, I must necessarily relate it to something else in general that precedes, and on which it follows in accordance with a rule, i.e., necessarily, so that the occurrence, as the conditioned, yields a secure indication of some condition, but it is the latter that determines the occurrence. (A194/B239)

As we saw in our detailed analysis of the Second Analogy argument, when we judge the order to perceptions to be a determinate order, we presuppose that there must be some “cause” from which the event we experience must follow in accordance with a rule, namely a particular causal law. In other words, what justifies our inference regarding the existence of some cause for any given event is that without such presupposition we would not be able to explain why we judge the order of perceptions to be connected in a necessary manner and thereby distinguish it from mere subjective order of perceptions.

Having described the general structure of transcendental arguments in the previous section, we can now see that the Second Analogy argument goes as follows:

**P1:** We experience events (or succession in the objects). (The Categorical Premise).

**P2:** For us to be able to experience an event and distinguish it from the experience of a persisting object, we must assume that the order of the perceptions constituting the event is fixed (or necessitated) by a cause from which this event follows in accordance with a particular causal law. (The Hypothetical/Transcendental Premise).

**Conclusion:** Every event presupposes something (a cause) from which it follows in accordance with a particular causal law.

With this transcendental argument, Kant shows that we cannot derive this principle a posteriori from inductive reasoning. Immediately after he puts forward his argument for the a
priori origin and objective validity of the CP, Kant compares his transcendental argument for the CP with the empirical derivation one can provide for it:

To be sure, it seems as if this [the Second Analogy argument] contradicts everything that has always been said about the course of the use of our understanding, according to which it is only through the perception and comparison of sequences of many occurrences on preceding appearances that we are led to discover a rule, in accordance with which certain occurrences always follow certain appearances, and are thereby first prompted to form the concept of cause. On such a footing this concept would be merely empirical, and the rule that it supplies, that everything that happens has a cause, would be just as contingent as the experience itself: its universality and necessity would then be merely feigned, and would have no true universal validity, since they would not be grounded \textit{a priori} but only on induction. (A195-96/B240-41)

While in this passage Kant does not explicitly mention Hume, having examined Hume’s account of the CP in Chapter III and Kant’s understanding of Hume’s views in Chapter IV, we can see that in the Second Analogy Kant refers to Hume’s empirical derivation of the CP. Also, in the B Introduction, Kant argues that Hume’s empirical derivation of the CP undermines the strict universality and the necessity of this principle:

Now it is easy to show that in human cognition there actually are such \textit{necessary and in the strictest sense universal, thus pure a priori judgments}. [...] If one would have one from the commonest use of the understanding, the proposition that \textit{every alteration must have a cause} will do; indeed in the latter the very concept of a cause so obviously contains the concept of a necessity of connection with an effect and a strict universality of rule that it would be entirely lost if one sought, as Hume did, to derive it from a frequent association of that which happens with that which precedes and a habit (thus a merely subjective necessity) of connecting representations arising from that association (B4-5).

Contra Hume’s empirical account the CP, which views this principle as merely contingent inductive generalization that expresses subjective necessity, Kant demonstrates the \textit{a priori} origin and the strict universality of this principle.

Since the validity of the CP must be presupposed in order to account for the possibility of our experience of events, it is clear that the CP is not valid beyond the proper sphere of possible
experience. That is, we cannot talk about the causality of things that are not possible objects of experience, such as God and soul. By arguing that we are able to experience succession in the object only through a particular causal law that necessitates the order of perceptions, Kant also shows the objective validity of the CP. That is, the validity of the CP is not due to its usefulness in experience, but rather due to its transcendental function in making experience first possible. In this regard, the CP is not a result of our psychological dispositions but necessarily and universally apply to all possible objects of experience.

Thus, in the Second Analogy Kant successfully responds to the Humean problem, which— as explained in Chapter IV— is a problem about the a priori origin, its proper sphere of application, the objective validity and necessity of the CP. While it is clear that the Second Analogy responds to the problem of causation, it is not clear if it also responds to the problem of induction. Next, we will examine whether the Second Analogy has the resources to successfully solve Hume’s problem of induction.

D. Does the Second Analogy solve the Problem of Induction?

(i) A brief reminder about Hume’s problem of induction

Before we can determine whether the Second Analogy argument solves the Humean problem of induction, let us briefly remind ourselves about the nature of the problem of induction and what the Second Analogy needs to establish in order to solve it. Hume starts his skeptical argument by questioning the foundation of our inferences from experience. According to Hume, when we make an inference from experience, we assume that our past experience, which gives us “direct and certain information of those precise objects only, and that precise period of time,” can be extended to future times and to other objects that are similar in appearance to those we experienced before (EHU, 4:2. p.114). In other words, all of our
inferences from experience, according to Hume, are inferences from observed instances to the unobserved instances. Hume questions the reliability of this kind of inference by raising the following question: “The bread which I formerly eat, nourished me; that is a body of such sensible qualities, was, at that time, endowed with such secret powers: But does it follow, that other bread must also nourish me at another time, and that like sensible qualities must always be attended with like secret powers?” (EHU, 4:2, p.114, emphasis added). Note that based on our past experience of particular instances of bread we make a generalization about all bread, and infer that all bread, including bread we have not yet eaten must have nourishing effects.

While Hume does not use the expressions “induction” or “inductive inference,” it seems that inference from experience corresponds to inductive inferences, namely inferences from particular instances of past experience to universal judgments that cover future experiences. According to Hume, if inferences from experience are justified, they must be justified either through deductive arguments or through experience. In order to make a deductive inference from past experience, we need a “connecting proposition” or an “intermediate step” that connects our judgment about an object of past experience to a universal judgment about all objects of the same kind, including similar objects of future experience (EHU, 4:2, p.115). This intermediate step, as Hume reveals, is the assumption that the course of nature is uniform such that the future will conform to the past. In other words, when we make an inference from experience, we assume that the future will resemble the past, and that similar causal powers will be conjoined with similar sensible qualities. Unless we assume that the course of nature will remain the same, and that the future will resemble the past, all past experience becomes useless and cannot give rise to inductive inferences (EHU, 4:2, p.115).
Hume argues that the assumption that the course of nature will not change, and consequently that the future will resemble the past, can be justified neither through demonstration (i.e., deductive arguments), nor through experience (EHU, 4:2, p.114-17). Since the necessary intermediate step of our inductive inferences, namely the assumption that nature is uniform, cannot be proven Hume concludes that such inferences lack any rational basis (EHU, 4:2, p.117). Following this brief description of Hume’s problem of induction, let us now examine whether Kant’s Second Analogy argument provides a solution to the problem of induction, which requires an a priori demonstration of the uniformity of nature.

(ii) Reasons to think that the Second Analogy solves the problem of induction

As noted in Chapter II: Kant’s Problem of Empirical Laws, on the strong reading of the Second Analogy, defended by Michael Friedman and Graciela De Pierris, Kant’s argument answers the Humean problem of induction by proving the a priori validity of the uniformity of nature. As De Pierris and Friedman put it, “the Analogies of Experience provide an a priori conception of the unity and uniformity of experience playing the role, for Kant, of Hume's principle of the uniformity of nature” (SEP, 2013). The question, then, is how exactly Kant’s Second Analogy argument establishes with regard to the uniformity of nature.

Recall that Friedman maintains the conceptual thesis, according to which the concept of causation refers to particular causal laws. The underlying reason for maintaining this conceptual thesis is that causal relations, according to Friedman, are necessary connections between different types of events. In other words, particular causal laws, according to Friedman, describe type-type causal connections, and they take the form “All A-type events cause B-type events.”

16. After he presents the skeptical problem concerning the validity of our belief in the uniformity of nature, Hume offers what he calls the “skeptical solution” to it, according to which all inferences from experience are simply effects of custom, not of reasoning (EHU, 5:1, p.121).
In fact, Friedman criticizes Buchdahl for holding that causal relations can occur between individual events as opposed to sequences of event-types.

The fact that causation occurs among different event-types, in turn, seems to ensure the repeatability of the laws that govern those causal relations (1992c, p. 76-7). Consequently, the existence of particular causal laws entails the existence of repeatable causal relations, which in turn justifies another principle, namely that “the same type of causes have same type of effects” or as Beck calls it, the “same-cause-same-effect” principle (1978, p. 126).

Contra the CP, the “same-cause-same-effect” principle seems to refer to regular causal relations. That is, in a world in which the same-cause-same-effect principle holds, it seems that there would also be uniform patterns or regularities among causal relations. Hence, Friedman seems to be justified in using “particular causal laws” and “uniformities” interchangeably. Furthermore, if we are justified in holding that there are uniform causal patterns, we also seem to be justified in making predictions about future causal relations based on our past experience. Thus, the strong reading seems to correctly infer the uniformity of nature from the existence of type-type causality guaranteed by the existence of particular casual laws. Given that the Second Analogy presents an a priori justification for the existence of particular laws, it seems that it also provides an a priori justification for the uniformity of nature, which in turn allows Kant to solve the Humean problem of induction.

(iii) **Why the Second Analogy does not solve the problem of induction**

Despite the initial appeal of the strong reading, there is a problem with the aforementioned inference from the existence of particular causal laws to the existence of uniform causal relations in nature. As H. J. Paton points out Kant’s Second Analogy argument

17. As Friedman writes, “Clearly, only types or kinds of events can follow one another always – that is, universally” (1992a, Note 4, p. 192; 1992c, Note 8, p. 97).
for the CP does not necessarily guarantee the existence of similarities and regularities. As Paton writes,

    It is theoretically possible that in a universe governed throughout by causal law there might be no repetitions [...]. [I]n spite of the formal and universal laws by which nature must be governed, the given matter might be such that in nature no similarities could be found; and clearly if we could find no similarities in nature, we could equally find no repetitions. (1936, p. 276)

In other words, the fact that the CP entails the existence of particular empirical causal laws does not mean that there are also regular causal relations. While particular causal laws guarantee the existence of event types, they do not guarantee that there will be multiple event tokens under those event types. It is in principle possible that there is only one event token under each event type. And if no two events fall under the same event type, this means that there are no regularities in nature.

In Idealism and Freedom, Allison appeals to Paton’s argument to undermine Friedman’s claim that the concept of causality entails the existence of empirical causal laws. Allison first points out that Kant’s argument does not rule out the fact that all empirical causal laws are what Allison calls “instantaneous laws” i.e., laws that are instantiated only once. Then, he argues that because genuine laws require regularity and repeatability, the Second Analogy, Allison argues, falls short of proving the existence of genuine empirical laws (1996, p. 86). In other words, Kant’s Second Analogy argument for the validity of the Causal Principle falls short of guaranteeing the existence of particular causal laws, because the Second Analogy does not say anything about the repeatability of those laws. Note that Allison does not present any arguments for the assumption that genuine laws require regularity and repeatability. Hence, it is not clear why we should not consider instantaneous laws as genuine.
Contra Allison, I do not think that Paton’s point undermines the thesis that the Second Analogy proves the existence of particular empirical causal laws. On my view, it rather undermines Friedman’s thesis that the existence of particular causal laws guarantees the existence of regularities and consequently the uniformity of nature. In order for us to be justified in believing that there are regular causal relations, we need to know more than just the existence of type-type causality, which follows from the existence of particular casual laws. More specifically, we need to know that particular empirical causal laws are in fact instantiated more than once.

So, in order for us to be justified in believing that nature is uniform (in a way that could answer Hume), we need to know not only that there are empirical laws, but also that at least some of those laws are repeatable. In a world in which there are only singularly instantiated empirical laws, there is no uniformity of nature in the Humean sense, because in such a world we would not be able to say that the future will conform to the past. Consequently, there is no guarantee that a world in which there are particular empirical causal laws is also one in which inductive inferences would be justified. That is why if Kant aims to respond to the problem of induction, he needs to prove more than just the existence of empirical laws, i.e., that they are also repeatable. Since Kant does not offer any argument for the repeatability of particular causal laws in the Second Analogy, we can infer that, contra the modest reading, Kant does not solve Hume’s problem of induction in that text.

I hope it is clear why the Second Analogy does not provide an a priori justification for the principle of the uniformity of nature, and therefore does not address Hume’s problem of induction. While a comprehensive account of whether and how Kant responds to Hume’s
problem of induction falls beyond the scope of this paper, we can at least see that if Kant has a response to the problem of induction it draws on resources outside of the Second Analogy.

One way we can know that empirical laws are repeatable is that particular empirical causal laws are subsumable under more general empirical laws, which in turn would guarantee that the general empirical laws are instantiated more than once. As mentioned before the faculty of reason orders empirical laws in a systematic way, and by so doing reason ensures that at least some empirical laws are instantiated more than once. Having such a system of general empirical laws that govern more particular ones, in turn, justifies our belief in the existence of regularities and uniformities in nature. That is why Kant’s regulative principles of “systematic unity of nature” and the “purposiveness of nature,” developed in the Transcendental Dialectic in the first Critique and the First Introduction to the third Critique seem to play the role of Hume’s principle of the uniformity of nature precisely by ensuring that particular causal laws are subsumed under more general causal laws.

That is why some Kant scholars view Kant’s conception of the systematic unity of nature as corresponding to Hume’s idea of the uniformity of nature. According to Paul Guyer, for instance, Kant’s idea of the “systematicity of nature” aims to address Hume’s problem of induction, yet it ultimately fails. As he claims, “Kant here, with the idea that the idea of the systematicity of the laws of nature is an idea that we prescribe only to ourselves and not to nature, an idea that we use to guide our investigation of nature as it really is, seems instead to give up on the task of answering what he had identified as the most serious problem on Hume’s account” (2008, p.119-20).
E. Conclusion

In this chapter, I argued that Kant’s Second Analogy argument demonstrates the *a priori* origin and objective necessity of the CP by explaining its role in making our experience of events possible. Since the Second Analogy argument proves the validity of the CP by showing its respective role in constituting experience, we can infer that the CP applies only to objects of possible experience, and thereby successfully limits its proper sphere of application. By so doing, Kant successfully addresses the Humean problem, which as we saw in the previous chapter is the problem of causation, namely a problem about the *a priori* origin, objective validity and the proper use of the CP.

I argued also that while the Second Analogy proves the existence of particular causal laws, it does not guarantee the repeatability of these laws. In order to be able to claim that nature is uniform in the sense that the future will resemble the past, however, we need to know that at least some of the causal laws are repeatable. Thus, the Second Analogy falls short of establishing the uniformity of nature, and thereby fails to address Hume’s problem of induction. On my alternative interpretation, therefore, the Second Analogy solves the problem of causation by proving the *a priori* validity of the Causal Principle, which entails the existence of law-governed causal relations. This, however, does not suffice to address Hume’s problem of induction. In conjunction with the previous chapter where the Humean problem is identified as the problem of causation, then, we can conclude that the Second Analogy argument serves Kant’s purposes. Consequently, lack of an *a priori* demonstration for the uniformity of nature in the Second Analogy does not entail a failure on Kant’s part.
CHAPTER VI: RESOLUTION OF KANT’S PROBLEM OF EMPIRICAL LAWS

A. Introduction

This chapter addresses the criticism that Kant propounds different accounts of empirical laws in the first and the third Critiques, and thereby lacks a univocal account of empirical laws. While in the first Critique, Kant seems to present a simple account of how we come to formulate empirical laws, in the third Critique he seems to provide a more complicated account which involves not only the faculties of sensibility and understanding, but also the faculty of reflective judgment. Moreover, Kant seems to attribute different kinds of necessity to empirical laws. For instance, while in the first Critique, he attributes “material necessity” to empirical laws, which derives from the faculty of understanding, in the third Critique, Kant appears to maintain that from the point of view of the understanding empirical laws are contingent, and that the only kind of necessity that these contingent empirical rules can express is due to their place in a system of laws, which is a function of our faculty of reflective judgment.

The goal of this chapter, therefore, is to address the objections against the coherence of Kant’s account concerning (i) the faculties involved in our knowledge of empirical laws, and (ii) the necessity of empirical laws. The structure of the chapter will be as follows: First, I will examine the extent to which Kant’s description of empirical laws in the first Critique is different from the third Critique, with a particular focus on the faculties that make knowledge of empirical laws possible. Then, I will focus on the necessity of empirical laws and examine whether Kant’s assertions concerning the necessity of empirical laws in the first and the third Critiques constitute a real conflict.

As I shall demonstrate, what appears to be novel in the third Critique has already been discussed in different terms in the first. In other words, despite its apparent simplicity, Kant’s
description of empirical laws in the first *Critique* is just as complicated as his description in the third *Critique*. I will also explain how Kant’s assertions in the third *Critique* with regards to the contingency of empirical laws are compatible with the passages in the first *Critique*, where he attributes “material necessity” to them.

**B. Kant’s Accounts of Empirical Laws in the First and the Third Critiques**

According to Paul Guyer, in the first *Critique* Kant presents a relatively simple account of empirical laws, according to which empirical laws are products of the synthesis of empirical intuition of sensibility and transcendental laws of understanding alone. As he writes,

> Kant’s position [in the first *Critique*] implies not only that empirical data must always be added to the categories of the understanding in order to arrive at empirical laws, but also that nothing else needs to be. As he puts it, ‘these *a priori* laws alone can give us instruction’ about empirical objects. No additional *a priori* assumptions of a substantive or methodological nature seem to be required in order to make empirical intuitions yield empirical laws. (1990, p. 223)

In other words, Guyer thinks that Kant in the first *Critique* presents a simple account of empirical laws, which does not require any other *a priori* contribution of our mind than the *a priori* principles of the understanding. Like Guyer, Friedman argues that empirical laws, for Kant, are the products of the synthesis of the *a priori* categories of the understanding and inductive empirical rules. He argues that empirical laws have some kind of a mixed status:

> [P]articular causal laws, for Kant, have a peculiar kind of mixed status: They result from a combination of inductively observed regularities or uniformities with the *a priori* concepts (and principle) of causality. Insofar as particular causal laws merely record observed regularities they are contingent and *a posteriori*; insofar as they subsume such regularities under the *a priori* principle of causality, however, they are necessary – and even, in a sense, *a priori*. (1992a, p. 174)

Contra this relatively simple description, which involves only the faculties of sensibility and understanding, Guyer argues that in the third *Critique* Kant complicates his account of empirical laws by arguing that in addition to the faculties of understanding and sensibility, the
faculty of judgment, which is a faculty that Kant introduced in the third *Critique*, plays a necessary role in the possibility of knowing empirical laws. As he puts it,

> Here [in the third *Critique*] he [Kant] unequivocally argues that our knowledge of empirical laws is dependent on a ‘transcendental principle’ that nature is systematically organized which we must presuppose as a principle for the use of our power of judgment but which we cannot actually prescribe to nature itself. (1990, p. 228)

To put it differently, contra the account presented in the first *Critique*, Kant’s description of our knowledge of empirical laws in the third *Critique* involves the necessary role of the power of judgment. As Guyer clarifies later, this transcendental principle is an *a priori* principle of the reflective judgment, namely the principle of the systematicity of nature (1990, p. 241). According to Guyer, Kant in the third *Critique* recognizes that compliance with this *a priori* principle of reflective judgment also plays a necessary role in the possibility of experiencing objects under empirical laws (1990, p. 241). Guyer describes this more sophisticated account of empirical laws presented in the third *Critique* as follows:

> Knowledge of empirical law is not simply a matter of filling in the schemata provided by the categories with the details offered by empirical intuition, but of projecting the idea of systematicity upon such data and attempting thereby to move from known to new laws. (1990, p. 242)

While Guyer rightly points out the necessary role Kant assigns to an *a priori* principle of the reflective judgment, namely the systematicity of nature in our knowledge of empirical laws, he is wrong to think that the account Kant presents in the first *Critique* lack this component and thereby is much simpler. As Guyer himself admits, Kant introduces the idea of systematic unity in the Appendix to the Transcendental Dialectic in the first *Critique*. In fact, Guyer even provides the following quote, which suggests that the *a priori* idea of systematic unity of nature plays a necessary role in our knowledge of empirical truths:
[T]he law of reason to seek unity is necessary, since without it we would have no reason, and without that, no coherent use of the understanding, and lacking that, no sufficient mark of empirical truth; thus in regard to the latter we simply have to presuppose the systematic unity of nature as objectively valid and necessary. (A651/679)

In this passage, Kant makes it clear that the systematic unity of nature, which he identifies as an a priori regulative principle of reason is essential for understanding to function coherently, which in turn suggests that it is a necessary precondition, for the possibility of knowing (as opposed to experiencing) empirical objects, i.e., for discovering empirical truths about objects of experience. This in turn suggests that Kant’s first Critique account of empirical laws is not as simple as it initially appears for Kant recognizes the necessary role that the regulative principles of reason play in our knowledge of empirical laws of nature.

Although Guyer admits the strength of the aforementioned passage, he, nonetheless thinks that Kant later changes his mind about the role of the systematicity of nature and drops the idea that it is a necessary condition for discovering empirical laws. As he writes, systematicity of nature is “merely regulative and subjective” and “does not contribute to the actual constitution of empirical knowledge –thus, presumably, to the discovery of particular empirical laws” (1990, p. 227).

In order to see the coherence of Kant’s assertions regarding the role of faculties play in our knowledge of empirical laws, we need to make certain distinctions that Guyer overlooks, such as knowing that there are empirical laws, discovering empirical laws. Once we make this distinction, we can see that –what Guyer calls– the relatively simple account of empirical laws, according to which the a priori principles of the understanding and empirical data suffice for knowing empirical laws, is an account about how we know that there are empirical laws, namely particular empirical instantiations of the general a priori principles of understanding. Knowing
that there are particular instantiations of those general laws, does not mean that we can discover them without any help from the faculty of reason. Kant makes it clear that in order to discover empirical laws, and thereby know the particular characteristic of individual empirical laws, we need to approach nature with the *a priori* regulative principles of reason.

While these regulative principles are subjective in the sense that they do not determine how we are going to experience objects, they do regulate our experience in a way that results with knowledge of empirical laws. Even though regulative principles do not guarantee that nature as we experience it will be in a particular way, they do play a necessary role in making our experience a coherent and systematic whole, which is essential for the possibility of discovering empirical laws. In this regard, the systematic unity of nature, which is an *a priori* regulative principle of reason in the first *Critique* plays the exact role of the transcendental principle of the reflective judgment, which is similarly named as the principle of the systematicity of nature. We can, therefore, assert that despite its initial simplicity, the first *Critique* account of empirical laws is just as complicated as Kant's description of empirical laws in the third *Critique*. Before we can conclude that Kant has a univocal account of empirical laws, however, we also need to address the apparent conflict with regard to the necessity that empirical laws express. In the next section, I will examine the passages where Kant seems to attribute different kinds of necessity of empirical laws and propose a way to read Kant’s apparently incoherent claims in a coherent manner.

C. The Necessity of Empirical Laws

(i) **Does Kant agree with Hume on the necessity of causal laws?**

In Chapter V, we saw that being subject to causality, for Kant, entails being subject to particular causal laws. Thus, the strong reading is right to insist that the Second Analogy proves
not only that there are causal relations among events but also that there are particular causal laws
governing those relations. However, we have not yet established whether the particular causal
laws are necessary, and if so, what kind of necessity they possess.

As we saw in our description of Kant’s problem of empirical laws in Chapter II, the
modest and the strong readings disagree not only on whether the Second Analogy proves the
existence of empirical laws, but also on the modal status of those law. According to Buchdahl’s
modest reading of the Second Analogy, Kant agrees with Hume that empirical laws are merely
contingent empirical generalizations. On the modest reading, empirical laws express −what
Buchdahl calls− “regulative necessity” only in a system of empirical laws, which is a function of
the regulative use of reason (or reflective judgment) (1965, p. 204).

Contra Buchdahl, Michael Friedman and Graciela De Pierris argue that empirical laws
carry a kind of necessity that merely inductive generalizations lack (SEP). The necessity of
particular causal laws, according to Friedman, derives from the understanding alone and it is
merely an approximation of the kind of necessity that a priori laws of understanding possess
(1992a, p. 190). He calls this type necessity as “empirical necessity,” and argues that Kant’s third
postulate in the Postulates of Empirical Thought explains the nature of this necessity.

As is clear, the modest and the strong readings attribute two different kinds of necessity
with different origins to empirical laws. Unfortunately, Kant’s assertions in different texts do not
favor one reading over the other. For instance, Kant’s description of the necessity of the
particular causal laws in the first Critique supports the strong reading. There, Kant claims that
empirical laws carry a kind of necessity that derives from the a priori principles of the
understanding: “[e]ven laws of nature, if they are considered as principles of the empirical use of
the understanding, at the same time carry with them an expression of necessity, thus at least the
presumption of determination by grounds that are \textit{a priori} and valid prior to all experience (my emphasis, A159/B189). Here, it is clear that particular causal laws express a kind of necessity that does not depend on their place in a system of empirical laws, but has an \textit{a priori} grounding in the faculty of understanding.

According to Kant, understanding can provide us with different kinds of necessity. For instance, the necessity that the empirical laws carry will clearly be different from the “transcendental necessity” of the \textit{a priori} principles of understanding. As Friedman points out, in his discussion of the third postulate in the \textit{Postulates of Empirical Thought}, Kant discusses the conditions for the application of the modal category of \textit{necessity}, and introduces a kind of necessity, namely the “material necessity,” which derives from our faculty of understanding, and yet different from both the “logical necessity” of analytic truths and the “transcendental necessity” of the \textit{a priori} principles of understanding. As he describes,

\begin{quote}
[A]s far as the third postulate is concerned, it pertains to \textit{material necessity} in existence, not the merely formal and logical necessity in the connection of concepts. […] Now there is no existence that could be cognized as necessary under the condition of other given appearances except the existence of effects in accordance with \textit{laws of causality}. Thus it is not the existence of things (substances) but of their state of which alone we can cognize the necessity, and moreover only from other states, which are given in perception, \textit{in accordance with empirical laws of causality}. (my emphasis, A226-27/B279-80)
\end{quote}

Material necessity, then, is a kind of necessity that expresses the relation between causes and their effects. That is why Kant uses “material” and “causal necessity” interchangeably. Kant explicitly states that this is the only kind of necessity we can cognize (or know about) with regard to the existing objects. Thus, Kant clearly thinks that the understanding is capable of providing a kind of necessity, which is distinct from the necessity that reason provides through its \textit{a priori} regulative principles. In this regard, the strong reading seems to be right to argue that
particular causal laws carry a kind of necessity, namely the causal (or material) necessity, which originates from the understanding.

While these aforementioned passages from the first *Critique* support the strong reading, Kant’s assertions in the *Critique of the Power of Judgment* (henceforth, the third *Critique*) seem to echo the modest reading’s thesis, according to which particular causal laws (when considered individually) are mere contingent empirical generalizations. In the following passage, for instance, Kant asserts that from the point of view of the understanding, empirical laws seem to be contingent:

[T]here is such a manifold of forms in nature, as it were so many modifications of the universal transcendental concepts of nature that are left undetermined by those laws that the pure understanding gives *a priori*, since these pertain only to the possibility of a nature (as object of the senses) in general, that there must nevertheless also be laws for it which, as empirical, may seem to be contingent in accordance with the insight of our understanding. (5:179-80)

It is clear that while in the first *Critique*, he explicitly writes that we can cognize the *material necessity* from which effects follow their causes in accordance with empirical laws of causality (A226-27/B279-80), in the third *Critique*, he argues that we may not be able to have insight into the necessity of empirical causal laws. Either Kant contradicts himself or he has changed his views on particular empirical causal laws between the first *Critique* (first edition published in 1781) and the third *Critique* (published in 1790). According to some commentators, the tension in Kant's writings is best explained by admitting that Kant lacks a unified view of empirical laws. According to H. J. Paton, for example, it was not until the third *Critique* that Kant recognized this problem regarding the gap between the general and particular causal principles, which lead him to offer a more sophisticated account of empirical laws (Paton, p. 276).

Although we need to acknowledge that there is an apparent tension between the accounts Kant presents in these different texts, this tension can be resolved if we make certain important
distinctions, such as, the distinction between “knowing that X is necessary” and “grasping or having insight into the necessity of X.” As Kant admits in the third *Critique*, the fact that all objects of experience are governed by *a priori* principles of understanding leaves the empirical nature undetermined. This in turn means that there might still be infinitely many distinct empirical natures that do not have anything in common with each other, except that they are all subject to the *a priori* formal principles of the understanding (5:183). Given the multitude of empirical laws, we -as finite human beings- might not be able to have insight into the necessity of the individual empirical laws, even if they might hold necessarily. That is why some causal judgments and particular causal laws might seem contingent when considered individually, as we can imagine that they could be otherwise. For instance, we cannot grasp the necessity of the individual particular causal law that states that “the sun causes warmth in the stone,” as there seems to be no reason why sun should not have the opposite effect on the stone tomorrow.

Not having insight into the necessity of individual particular causal laws, however, does not mean that they are contingent in the way that accidental regularities, known merely through experience, are contingent. Let us illustrate this point with an analogy. Assume that we are presented with an *a priori* argument, which demonstrates that all mathematical truths are necessary. This argument would not enable us to have insight into the necessity of any individual mathematical truth, as we might not be able to comprehend its proof, for instance. Nonetheless, with the aforementioned argument we can know *a priori* that if an individual mathematical proposition is true, it must be necessarily true. That is, we can know *a priori* that all mathematical truths are necessary, even though we might not be able to grasp the necessity of some of the particular mathematical truths.
Similarly, Kant’s argument in the Second Analogy, if sound, proves the existence of particular empirical causal laws, which -as being laws- must be regarded as necessary. This, however, does not mean that we will be able to grasp the necessity of individual particular causal laws through the understanding. Hence, Kant does not contradict himself when he admits that particular empirical causal laws express a material or causal necessity, which originates in the understanding, even though when taken individually they appear contingent from the understanding’s point of view.

Having established that we can know that particular causal laws are express material necessity despite the fact that we might not have insight into their necessity, we one might wonder whether we can ever have insight into the necessity of particular empirical causal laws. Next, we will attempt to answer this question, which in turn will allow us to distinguish two different kinds of necessity that empirical laws can possess, and consequently resolve another apparent conflict in Kant’s writings.

(ii) **Different kinds of necessity that empirical laws express**

As we saw, in the first *Critique*, Kant acknowledges that particular empirical causal laws carry material necessity. In the third *Critique*, on the other hand, he admits that we might not be able to gain insight into the necessity of empirical laws, which in turn –as I have argued– explains why they might seem contingent from the point of view of the understanding. The aforementioned analogy with mathematical truths helps us to see how that is possible. However, one might worry that even though we cannot gain insight into the necessity of all mathematical truths, can grasp the necessity of some of them, which in turn allows us to grasp the kind of necessity the mathematical truths express. Similarly, one would expect that we should be able to gain insight into the necessity of at least some of the empirical laws.
According to Friedman, Kant’s derivation of the universal law of gravitation allows us to see how this particular empirical law is grounded in the *a priori* laws of understanding, and thereby enables us to have insight into the necessity of this empirical law, which ultimately is a function of the faculty of understanding (1992a, p. 190). Note that despite the role of the empirical data in the derivation of it, the law of universal gravitation, which is an empirical law, expresses a kind of necessity due to its relationship to the *a priori* laws (1992a, p. 174).

As Buchdahl points out, Kant’s assertions in the published *Introduction* of the third *Critique* suggest that empirical laws must be regarded as necessary due to an *a priori* principle of reflective judgment, as opposed to understanding:

[T]here must nevertheless also be laws […] which, as empirical, *may seem to be contingent in accordance with the insight of our understanding, but which, if they are to be called laws (as is also required by the concept of a nature), must be regarded as necessary on a principle of the unity of the manifold, even if that principle is unknown to us. (italics mine, 5:179-80)

In this passage, Kant argues that even though we do not have insight into the necessity of particular casual laws, they must be considered as necessary due to “a principle of the unity of manifold”, which as he explains later is a principle that is responsible for the systematic subordination of particular casual laws under one another. Kant identifies this principle as an *a priori* principle of reflective judgment, namely the “principle of purposiveness of nature.” As Kant writes, “The purposiveness of nature is thus a special *a priori* concept that has its origin strictly in the reflecting power of judgment. For we cannot ascribe to the products of nature anything like a relation of nature in them to ends, but can only use this concept in order to reflect on the connection of appearances in nature that are given in accordance with empirical laws” (5:181). It seems that particular empirical causal laws express a kind of necessity, which derives from the reflective judgment and thereby different from the empirical necessity that is a function
of the understanding. Since such systematic order of empirical laws, in which empirical laws acquire a kind of necessity, is a function of the reflective judgment or regulative reason, Buchdahl calls this kind of necessity the “regulative necessity” (5:179-80). Note that we gain insight into the regulative necessity of empirical laws when they are placed in a system of laws, i.e., independently of their relationship to a priori rules of the understanding.

Even though these passages in the third Critique appear to be in conflict with Kant’s assertions in the first Critique, they is not a genuine contradiction in Kant’s position. Despite their many disagreements, both the modest and the strong readings seem to agree that empirical laws express one kind of necessity, namely the regulative necessity, which derives from the regulative employment of reason (or reflective judgment) and material (or causal) necessity, which is a function of the understanding respectively.

While acknowledging the existence of these two different kinds of necessity in Kant’s account of empirical laws might indicate that Kant has changed his mind about the modal status of empirical laws, these two accounts can also be read as complementing each other. Kant clearly attributes two different kinds of necessity to empirical laws. We can accept, therefore, that the strong reading is right to maintain that Kant disagrees with Hume on the status of empirical laws. However, both the strong and the modest readings falls short of presenting a complete account with regard to the necessity of empirical laws.

D. Conclusion

In this final chapter, I explained how we can resolve the apparent tension between Kant’s assertions about the empirical laws in the first and the third Critiques. Contra Guyer, I argued Kant’s conception of the empirical laws in the first Critique is not substantially different from the account he presents in third Critique. In both texts, Kant argues that in order to be able to
discover empirical laws we need to assume the systematicity of nature, which is an *a priori* principle of regulative reason or reflective judgment. Thus, despite its apparent simplicity, Kant’s description of empirical laws in the first *Critique* is just as much complicated as his description in the third *Critique* and as I have shown what appears to be novel in the third *Critique* has already been discussed in different terms in the first.

I have also explained how Kant’s assertions in the third *Critique* with regards to the contingency of empirical laws are compatible with the passages in the first *Critique* where he attributes “material necessity” to particular empirical causal laws. Particular empirical causal laws -qua laws- must carry some kind of necessity. However, as Kant admits in the third *Critique* they might appear contingent from the point of view of the understanding, simply because we might not be able to gain insight into their necessity. Finally, in contrast with both the modest and strong readings, we saw that Kant attributes two different kinds of necessity to empirical laws, namely, material (or causal) and regulative necessity, each of which derives from a different faculty.
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