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Louis de la Forge on Mind-Body Interaction and the Case Against Occasionalism

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Approval of the Dissertation Committee

This dissertation has been duly read, reviewed, and critiqued by the Committee listed below, which hereby approves the manuscript of Melissa Kalaee Gholamnejad as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Philosophy.

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Abstract

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Fidelity to the Cartesian philosophy requires a defense of dualism as well as mind-body union and interaction, all the while keeping to some form of the causal likeness principle. Each of these positions are ones that Descartes maintained throughout his writings. Yet, successors and scholars alike have noted the inconsistencies that arise from defending these views conjointly and have argued that one or more of them should be abandoned. Even the first generation of Cartesian successors whose fidelity to the Cartesian principles was especially steadfast, such as Louis de la Forge, have been interpreted and characterized as giving up causal interactionism and wittingly or unwittingly embracing occasionalism.

In my dissertation project, I have made mind-body not body-body cases the starting point of the inquiry into cartesian causal interactionism and from there developed a general model of interaction. This goes against the scholarly norm of focusing on the body-body cases to develop a model that then cannot explain how the mind-body cases work. This is not a minor change in point of view, but rather, requires a paradigm shift in cartesian studies, particularly with respect to understanding mind-body union and interaction. Further supporting the needed paradigm shift in our reading of La Forge is that in his account of union criteria we discover that mind-body union is the *true* union and that body-body unions are considered such only by extension. As such the case of mind-body union should be taken as the exemplar case and not body-body.

According to La Forge, mind and body are linked via the relative attribute of will and share a relationship of mutual and reciprocal dependence. Union is not based on a spatial relation. The union is a hybrid mode – a way of being of the two substances if and when they stand in such a relation to one another. While, the union provides the commonality needed to bridge the gap of what two distinct substances have in common it does not provide the explanation of *how* mind and body interact. Operationalizing the union in terms of mutual and reciprocal dependence requires further explanation.

La Forge explains that mind and body are secondary (particular) causes. The causal model of interaction of mind and body is one in which these particular causes and their relation of mutual and reciprocal dependence allows for the action of the one to bring about the effect in the other. The body's movements stimulate thoughts in the mind and the mind's thoughts direct movements in the body. There is a bi-directional causal interaction. Furthermore, by coupling La Forge's account of union and interaction with that of Nadler's proposed occasional causation model (not occasionalism) we find that mind and body both have causal agency in the weaker secondary sense. Both substances have the power to *determine* and *direct* motion, albeit neither mind nor body create motion *per se*. La Forge establishes a key distinction between universal and particular causes, which then grounds his subsequent attribution of secondary causal power to wills – to direct the movements of bodies, and to bodies in virtue of their modes of configuration – to direct the movement of other bodies. While, God is the universal and efficient cause that creates minds, bodies, and motion, He has minimal involvement in the particular determinations of volitions and movements. He imparts power to His creatures to determine motion (different than creating new motion *ex nihil).* God conserves the world and the laws set by Him in the form of three laws of motion and seven laws of union. However, finite substances

such as mind and body also have force, albeit not in the same sense as God does as the universal and total cause, but rather as particular secondary causes that have autonomy and can determine the direction and local quantity of motion. Thus, La Forge explains how both mind-body and body-body interactions are genuine causes, i.e., non-occasionalistic.

Accordingly, in keeping with Cartesian philosophy La Forge maintains dualism, and provides an account of union and an account of interaction that is not occasionalistic. Both mind-body and body-body interaction is based on equivocal causation – the effect does not strictly resemble the cause – but both operate through the likenesses of relations of union, mutual dependence and proximity respectively. Thus, La Forge's causal model that has minds and bodies interacting based on their relation of mutual and reciprocal dependence, and bodies interacting based on their shared mutual proximity and dependence, provides a weaker account of the causal likeness principle. Nonetheless, there is nothing inconsistent with his defense of a weaker notion of likeness that does not demand resemblance. My examination of La Forge's *Treatise on the Human Mind* has demonstrated that we can maintain fidelity in our interpretation of Descartes and the Cartesian philosophy that maintains its adherence to dualism while giving an account of union and causal interaction.

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Chapter 1 - Introduction

1.1 Central Problems with Descartes's Dualism

A cornerstone of Descartes's philosophy is his mind-body substance dualism and the argument he offers for the real distinction between them. Throughout the *Meditations*, Descartes makes it abundantly clear that there "is a great difference between the mind and body, inasmuch as the body is by its very nature always divisible, while the mind is utterly indivisible."[1] The mind is a substance that thinks, and it has various ways, or modes of being, such as intellection, doubt, understanding, and willing. Body or matter is a substance that is extended that has "length, breadth and depth and is capable of various shapes and motions; moreover, these shapes and motions are merely modes which no power whatever can cause to exist apart from the body."[2] Both substances, mind and body, are separate such that "thought does not belong to the nature of the body" and similarly extension and divisibility do not belong to the nature of the mind – both exist independently.[3] There is a "real distinction" between mind and body, meaning they can exist separately and independently of one another. The real distinction thesis gives rise to a well-known problem in the literature referred to as the problem of causal interaction.

Descartes's contemporaries raised concerns about the possibility of causal interaction between mind and body, notably Pierre Gassendi (1592 – 1655) in the *Fifth Objections & Replies* and Princess Elizabeth of Bohemia (1618 – 1680) in her correspondence with Descartes. For how, by what means, can two things that share nothing in common causally interact?

In a letter to Princess Elizabeth, 21 May 1643 Descartes responds to his relative silence on the matter:

[1] CSM II 59
[2] CSM II 297
[3] CSM II 299

> There are two facts about the human soul on which depend all the knowledge we can have of its nature. The first is that it thinks, the second is that being united to the body, it can act and be acted upon along with it. About the second I have said hardly anything; I have tried only to make the first well understood. For my principal aim was to prove the distinction between the soul and the body, and to this end only the first was useful, and the second might have been harmful.[4]

Descartes explains that given his primary interest to usher in a new dualistic philosophy (away from traditional scholastic thought), he privileged clear knowledge of the distinction of substances as a more important goal than establishing less than clear knowledge of their union or interaction. To this end he saw it prudent to emphasize their real distinction rather than their union. To further explicate this point regarding certainty, Descartes in the same letter to Princess Elizabeth discusses primitive notions. These notions are the building blocks of our conceptions. These primary notions are few but used daily in our comprehension of things and these general primitive notions are "of being, number, duration, etc."[5] In regard to "body in particular, we only have the notion of extension" and in regard to "the soul on its own, we have only the notion of thought."[6] The notion of extension contains within it the notion of shape and motion. Similarly, the notion of thought contains within it the notion of intellect and inclinations of the will. In regard to "the soul and body together, we have only the notion of their union, on which depends our notion of the soul's power to move the body, and the body's power to act on the soul and cause its sensations and passions."[7] Union is the notion that allows us to better understand the concept of a united mind and body. The notion of extension entails shape and motion, whereas the notion of union entails the soul's power to move the body and the body's power to act on the soul resulting in sensations and passions. In order to have clear and distinct

[4] CSMK 218
[5] Ibid.
[6] Ibid.
[7] Ibid.

knowledge of mind as distinct from body, and not to confuse them, it is paramount to know what notion belongs to what thing. Descartes writes;

> I observe next that all human knowledge consists solely in clearly distinguishing these notions and attaching each of them only to the things to which it pertains. For if we try to solve a problem by means of a notion that does not pertain to it, we cannot help going wrong.[8]

If we try to attach a notion to a thing to which it does not belong, we will be led into error. Most errors are because we have applied the wrong notion to the wrong thing. An example of applying a notion to a wrong thing is when, "we try to conceive the way in which the soul moves the body by conceiving the way in which one body is moved by another."[9] We are in the wrong when we try to apply the notions of how one body moves another body to the notion of how the soul moves the body. In the same letter, Descartes continues;

> So I think that we have hitherto confused the notion of the soul's power to act on the body with the power one body has to act on another. We have attributed both powers not to the soul, for we did not yet know it, but to the various qualities of bodies such as heaviness, heat, etc.[10]

In order to avoid this error of misattribution, Descartes took time and care to establish the real distinction thesis at the expense of the union and interaction theses. But this does not imply nor mean that Descartes did not think that mind and body are united, or that they cannot interact. On the contrary Descartes very much believed that mind and body are united, at least in the case of the human being, and the result of this belief can be found especially in *The Passions of the Soul*. The biggest lesson from the 21 May 1643 letter to Princess Elizabeth is that in order to understand how the soul moves the body, we cannot approach it as we would in understanding how a body moves another body. Unfortunately, we do not get much else in the letter. Descartes

[8] Ibid.
[9] Ibid.
[10] CSMK 219

never provides a clear account of the casual interaction between two substances. A similar sentiment as above is found in Descartes's last published work in *The Passions of the Soul*.[11] In part one, Descartes writes;

> Next I note that we are not aware of any subject which acts more directly upon our soul than the body to which it is joined. Consequently, we should recognize that what is a passion in the soul is usually an action in the body. Hence there is no better way of coming to know about our passions than by examining the difference between the soul and the body, in order to learn to which of the two we should attribute each of the functions present to us.[12]

In the case of the human being, the mind and body are joined. The passions of the soul bring about actions in the body and the body *acts directly* on the soul, but in the interest of better understanding our passions, first we must examine the difference between the soul and the body. As stated in the 21 May 1643 letter to Princess Elizabeth, in order to avoid error, we must first understand what passions belong to the soul and which passions belong to the body. Descartes asserts that soul and body *are* joined/united, and the body directly acts on the soul and the soul acts on the body by bringing about action. However, as before, we are left without an explanation of *how* mind and body, as two differing substances, are joined and interact with one another.

According to Hoffman, in his article "The Unity of Descartes's Man," Descartes deliberately provides little evidence in his writings for his stance on the union thesis. As Hoffman points out in another letter to Regius, Descartes expresses his position for the lack of union thesis in his work;[13]

> … many more people make the mistake of thinking that the soul is not really distinct from the body than make the mistake of admitting their distinction and denying their substantial union, and in order to refute those who believe souls to be mortal it is more important to teach the distinction of parts in man than to teach their union.

[11] *The Passions of the Soul* was published in 1649 – six years after his letter to Princess Elizabeth.
[12] CSM I 328
[13] Hoffman, 1986, p. 342 – (the actual letter can be found in CSMK 205 - 209)

In this particular letter Descartes is providing Regius with guidance on how to respond to Scholastic critics, and to avoid any further problems.[14] Since the goal is to respond to whether humans are *ens per accidens* or *ens per se,* Descartes sees it as prudent to articulate the distinction thesis and the immortality of the soul first and foremost than to make a case of the union of mind (soul) and body. In the same letter to Regius, Descartes knowing that what he writes is to address a Scholastic audience, acknowledges that thus far he has not openly denied substantial forms and real qualities and he has merely argued that such qualities are not needed "to explain the causes of natural things."[15] Descartes, aware of his audience, knows that by not utilizing the Scholastic doctrine it is equal to the denial of the Scholastic doctrine and he is ready to reject substantial forms if pressed. Nevertheless, in pursuit of ushering in his new dualistic philosophy Descartes uses Scholastic terminology to communicate this dualistic philosophy. This includes an examination of human beings as *ens per se* or an *ens per accidens*. From the same letter to Regius, Descartes's writes,

> When we said that a human being is an *ens per accidens*, we meant this only in relation to its parts, the soul and body; we meant that for each of these parts it is in a manner accidental for it to be joined to the other, because each subsist apart, and what can be present or absent without the subject ceasing to exist is called an accident. But if a human being is considered in himself as a whole, we say of course that he is a single *ens per se*, and not *per accidens*; because the union which joins a human body and soul to each other is not accidental to a human being, but essential, since a human being without it is not a human being.[16]

In the Scholastic doctrine to say something is an *ens per se* is to say that it is a substance. However, for Descartes there is a corporeal substance and a thinking substance; they are united

[14] "Regius, an exponent of Descartes's views at the University of Utrecht, had offended his Aristotelian colleagues, who led by Voetius, attempted to get the magistrates to forbid him to teach" (Hoffman, 1986, p. 345).
[15] CSMK 207
[16] CSMK 209

but the result of this union, a human being, is not a substance. Nevertheless, to be a human is to have a union of mind and body. Thus, it becomes crucial for Descartes to articulate the distinction of substances and their modes since the debate with the Scholastic is on the grounds of what is a substance and an accident.

To summarize, Descartes claims that: 1) mind and body are distinct substances, and 2) we know *that* they are united (but, we do not know *how* they are united), and, 3) we know *that* the mind and body interact i.e., the soul has the power to act upon the body and the body acts upon the soul, and 4) we do not know *how* this interaction takes place, only *that* body-body interaction is not the solution for understanding how this interaction takes place.

Yet, one more problem regarding causation has to be taken into consideration. In addition to the real distinction argument of the Sixth *Meditation*, there is also Descartes's claim that there must be a kind of "likeness" or similarity between cause and effect. In the Third *Mediation*, Descartes writes that, "…there must be at least as much <reality> in the efficient and total cause as in the effect of that cause."[17] Richard Watson draws two important consequences from this likeness principle—one epistemological and the other causal. The most important for our purpose here, is the claim about causal similarity (hereafter, the Causal Likeness Principle (CLP)) and Descartes's alleged inability to meet the condition of similarity, according to Watson;

> The major difficulties stem from the dualistic system of mind and matter in which the ontological categories of substance and modification are exhaustive, and which included epistemological and causal likeness principles. If the representation must be in some way like the object represented, and the cause is some way like the effect, then the Cartesian metaphysical system incorporates an unbridgeable gulf between mind and matter.[18]

[17] CSM II 28
[18] Watson, 1966, p. 2

The worry, given that mental substances and physical substances share nothing in common, is how a physical state can influence a mental state and vice versa? In addition, if they do affect one another, in what way are they interacting? For example, when I voluntarily extend my leg, how is my mind willing my body to move, and how is my body producing a sensation in the mind when motions and sensations are wholly different?

It seems that if we are to maintain the dualism and the interactionism of the Cartesian philosophy then CLP must be majorly revised or discarded. Simply put, the CLP demands that if something (a cause) produces something else (an effect), then the effect must be like the cause in some important way. However, it is not obvious how CLP operates or can operate in the case of two differing substances (mind and body) as they share no substantial likeness. According to Watson each thinker that contributed to Cartesian philosophy after Descartes fails at this project, i.e., giving an account of interaction where there are two distinct substances. In order to maintain the dualism and the causal interactionism that Descartes's philosophy requires, Watson concludes that CLP must be discarded. However, the only substitute for CLP would be to deny natural necessity altogether and appeal to the omnipotence of God for all effects. According to Watson, this is the sure road to occasionalism, the claim that only God is the true and efficient cause, with no room for secondary or finite causes.

In agreement with Watson, Kenneth Clatterbaugh makes a case as to why Descartes's CLP must logically be abandoned:

> Ultimately, Descartes's likeness principle is abandoned for four quite different reasons. The first we have only alluded to; namely, the causal likeness principle unless it is greatly diluted does not help to explain how substances that are not very much alike can interact. Examples would be God and extended things or minds and matter. Second, one way the conflict of metaphysical principles can be resolved is to abandon causation by the transfer of properties which provides a major justification for the restricted causal likeness principle. In the case of Rohault, having abandoned the justification, the tendency is to abandon the

> principle. Third, Descartes's second justification for the restricted causal likeness principle fails because Cartesian physics fails; quantity of motion is not preserved, as Malebranche and Leibniz both pointed out. And finally, Hume offers an alternative analysis of causation which does not require, although it does allow for, a similarity between cause and effect.[19]

An initial but partial response to Watson and Clatterbaugh that will pave the way to understanding La Forge's response taken up in subsequent chapters, is that when we are discussing union (and interaction) of mind and body we are discussing a particular body united to a particular mind. We are not discussing the general substance of mind being united to the general substance of body and looking for common modes in each. Of course, the suggestion that the interaction is based on something common, but not common to one or the other substance *per se*, demands an answer to the question how two different particular things, that belong to really distinct substances, could have anything in common that permits the interaction. But the idea is that it is possible to defend dualism *and* interactionism *and* honor CLP if we loosen the requirements of the CLP (*pace* Watson).

1.2 Proposed Solutions to Dualism

It seems, then, that there are three paths taken to reconcile the seemingly inconsistent triad of dualism, strict CLP, and interactionism. The first path is to maintain substance dualism and strict CLP and abandon interactionism, as Watson and Clatterbaugh argue Descartes is logically committed to. The second path retains a strict CLP but eliminates substance dualism (and hence any difficulties with interactionism). The third path, less clear than the first two, modifies CLP making room for dualism and interactionism (pace Watson).

[19] Clatterbaugh, 1980, p.402

A number of Descartes's contemporaries pursue these paths, which merits some examination and evaluation. In the process of this review, I argue that 1) in order to retain substance dualism and strict CLP, Watson and Clatterbaugh are correct that the interaction thesis must be abandoned, as we see in Malebranche; 2) in order to retain strict CLP and interactionism, dualism must be abandoned, as we see in Leibniz and Spinoza; and 3) if one wants to keep causal interaction between two distinct substances then the strict CLP must be modified, as we will see in La Forge.

1) Maintain Dualism + strict CLP = Occasionalism

Nicolas Malebranche (1638 – 1715) holds the first position. Malebranche defends dualism, keeps strict CLP, and eliminates interactionism, thus making a case for occasionalism. Malebranche states:

> As I understand it, a true cause is one in which the mind perceives a necessary connection between cause and its effect. Now, it is only in an infinitely perfect being that one perceives a necessary connection between its will and its effects. Thus God is the only true cause, and only he truly has the power to move bodies. I further say that it is not conceivable that God could communicate to men or angels the power he has to move bodies…[20]

For Malebranche, it is God alone who has the power to perceive necessary connections and thereby to produce effects in substances. The human mind cannot perceive necessary connections between things, nor does it have the power to move bodies. For example, if a billiard ball strikes another billiard ball and it moves, the striking billiard ball provides the occasion for which God wills to move the billiard ball that is struck. Likewise, if on the occasion of certain motions in my body, I feel hunger, then the connection is produced by God directly. Thus, embracing a strict dualism and CLP entails abandoning the true causal interaction of things. The true interaction is between God and created things, not between created things.

[20] Garber, 1993, p. 25

2. Maintain strict CLP + Interactionism = Monism (denial of dualism)

Spinoza (1632 – 1677) and Leibniz (1646 – 1716) choose variants of the second option. Both abandoned substance dualism in favor of adherence to strict CLP and a somewhat trivial interactionism. Spinoza, unhappy with the consequences of Descartes's dualism, eliminated finite mind and body as substances making them attributes of one, infinite substance. Mind and body, as modes of the same substance (God) could interact by their nature, consistent with strict CLP. Problems arise for Spinoza later down the line with his doctrine of parallelism—but these are not relevant to his stance on monism, CLP, and interactionism. Leibniz similarly unhappy with Descartes's dualism, argued that there is only one kind of substance—simple, infinite, extensionless monads—and that minds and bodies are composites arising out of a singular substance. Thus for Leibniz, like Spinoza, there is no problem of interaction between substances because they are all of the same kind. Like Spinoza's parallelism, however, Leibniz faces scrutiny for his doctrine of Pre-established Harmony. How finite bodies interact with bodies, and finite minds with bodies, is a matter for the laws of interaction pre-established by God. Nonetheless, what is relevant here is that in both Spinoza and Leibniz strict CLP is observed as minds and bodies share the same substantial nature, grounding their "interaction," but dualism is abandoned.

3. Maintain Dualism + Interactionism = revision of CLP

Finally, those who attempt the third path, a reconciliation of the three theses, had to dispense with a strict adherence to CLP. These are the so-called Orthodox (non-occasionalist) Cartesians, a term coined by Watson in his book *The Downfall of Cartesianism*.[21] Such thinkers, according

[21] Watson coined the term orthodox Cartesians referring to non-occasionalist Cartesian ideas, "these philosophers who do not offer occasionalist solutions to Cartesian problems are referred to as orthodox Cartesians…They retained the strict dualism between mind and matter, and thus could explain interaction only by dispensing with the causal

to Watson, included Robert Desgabets (1610 – 1678), Jacques Rohault (1620 – 1672), Pierre Sylvain Régis (1632 – 1707), Antoine Le Grand (1629 1699), Antoine Arnauld (1612 – 1694), and finally Louis de La Forge (1632 – 1666).[22] Orthodox Cartesians keep to a strict dualistic stance but according to Watson each must abandon his adherence to strict CLP in order to account for the interaction between mind and body. I agree with Watson's argument thus far. For example, Desgabets dispenses with CLP and states that interaction is one of "God's mysteries."[23] We acquire knowledge of soul, body and union through the natural light (our use of the faculty of reason). But ultimately God is the authority in charge of establishing the laws of the interaction between mind and body. Likewise, Régis held the view that CLP is at odds with the more basic Cartesian dualistic philosophy. His conclusion was that "while interaction between bodies can be explained by reason in the order of nature, interaction and knowing between spirit and body are events in the order of grace which can be 'explained' (i.e., accepted) only by faith."[24] The union of mind and body is not based on the essence of mind and body but made possible by the of grace of God. Schmaltz argues for Desgabets' and Regis' account of real secondary causes and causal interaction but, concludes that the account falls short of their goals. Lennon has argued that Desgabets' account of the individuation of bodies and minds commits him to the view that mind-body union is ideal and not real. (1994)

Recently, scholars have distinguished the problem of union from the problem of interaction. Paul Hoffman rightly notes that although related, the solution to the union problem

likeness principle. Concurrently, in order to contend that mind could know matter which was utterly different from it, they also had to deny the epistemological likeness principle" (Watson, 1966, p. 64).

[22] Although some scholars have objected arguing that some of the orthodox Cartesians are occasionalists.

[23] Watson, 1966, p. 65

[24] Watson, 1966, p. 75

does not give us a solution to the interaction problem. As Hoffman states in his article "The Unity of Descartes's Man,":

> It is this problem of the nature of the union between mind and body, as opposed to the problem of their interaction, which is the subject of this paper. Moreover, I do not wish to discuss the nature of the union of mind and body with respect to its success in solving the problem of mind-body interaction.[25]

In his examination of the union problem, he argues for a kind of trialism, or pluralism, of substances.[26] It seems that Hoffman takes a pseudo fourth path by acknowledging dualism while making a case for the union of mind and body as a third kind of substance.[27] Daisie Radner also promotes a clear separation of the discussion on union and interaction. According to Radner, the union is a primary notion for Descartes, and as such, is not reducible any further and does not provide the solution to the "interaction problem." Radner writes,

> Thus Descartes' notion of the union of mind and body arises in response to the problem of how the mind and the body can causally interact. Since the union of mind and body is meant to account for the possibility of interaction between the mind and the body, it cannot in turn be explained in terms of that interaction. [28]

I agree with both Radner and Hoffman that the union thesis is distinct from an account for the causal interaction. Accounts of both union and interaction are needed in order to address the challenges one must face by accepting Cartesian dualism and interactionism. Since the two substances are fundamentally different in kind, they would seem to lack commonality that would allow them to interact. As Spinoza states in Proposition III of the *Ethics*, "things which have

[25] Hoffman, 1986, p. 340
[26] In one version, Hoffman asserts that man is a third substance, in addition to mind and body. He also suggests that there are multiple individual substances—humans and bodies—which takes Descartes in the direction of a pluralistic metaphysics.
[27] I say "pseudo" fourth path because the logic mirrors that of the first path: a denial of dualism + CLP + interactionism.
[28] Radner, 1971, p.162

nothing in common cannot be one of the causes of the other."[29] Claiming that mind (in particular) and body (in particular) are both finite substances is not enough commonality to provide the needed foundation for causal interaction.

Nonetheless, the union thesis does provide the commonality needed to lay the foundation for the explanation of how two differing substances causally interact. As noted above, Hoffman is only interested in this commonness (the union thesis) between the mind substance and body substance. He does not take on the discussion of causal interaction. According to Hoffman then, the two substance are united based on a relationship of inherence, "…things which can exist apart from each other can form an *ens per se*, provided that they stand in appropriate relation to one another. And all agree that the relation in question is the inherence relation."[30] For Hoffman, the commonality between the two differing substances, mind and body, is the shared relationship of inherence. For Hoffman the union of two "distinct things, mind and body, can somehow generate another thing, the man or a human being, which is itself a unity, that is, a genuine or an *ens per se*."[31] The union that is formed between mind and body produces a third thing, and in order for a human being to exist it (the man) must be united to a mind. Since, this union is based on a relationship of inherence but (not based on each substance containing the essential attributes of the other substance), the "real distinction" between mind and body is based only on a modal distinction.[32] But if Hoffman is right, then real distinction, and Cartesian substance dualism itself, must be abandoned.

[29] Spinoza Complete Works, trans. Samuel Shirley (Hackett Publishing Company, Inc. Indianapolis/Cambridge, 2002), p.218
[30] Hoffman, 1986, p. 364
[31] Hoffman, 1986, p. 341
[32] Hoffman, 1986, p. 365

Gideon Manning, in an unpublished work titled "Does Descartes Believe We Are Just 'Straddling Modes'?", further drives the point that Hoffman is making by stating "that there exists a mode that can be viewed from two perspectives and that the causation that exists between two substances results from a single numerically identical effect manifesting simultaneously in both mind and body."[33] Manning reaches this conclusion based on the action and passion dynamic that Descartes presents in his work *Passions of the Soul*. According to Manning, Descartes regards action and passion "as a single numerically identical mode in two otherwise really distinct substances."[34] The union then, what two differing substances have in common, is between modes – the union of mind substance with a particular human body (a mode). Manning states that the existence of a human being is its dependence or union to the mind substance. The suggestion that the commonality the union provides between two differing substances (mind and body) is between their modes has potential; however, Manning is asserting that the mode of body *is* a mode of the mind (substance) *and* a mode of matter (substance). This is essentially a kind of modal identity that we see in Spinoza's parallelism. On this account, if an individual has the thought 'I want to raise my arm' it will instantly be followed by the arm being raised. However, there is no direct causal connection between the mental event (thought of raising arm) and the physical event (I raise my arm).[35] If body in particular (as a mode of body substance) is also a mode of a thinking substance then there is no need for a causal connection. This makes the claim that 1) union of mind and body is based on their modes but not modes that are intermingling with one another from two different substances but rather each substance

[33] Gideon, unpublished, p. 38
[34] Gideon, unpublished, p. 2
[35] Bobro, Marc, "Leibniz on Causation", *The Stanford Encyclopedia of Philosophy* (Fall 2017 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/fall2017/entries/leibniz-causation/>.

individually has the same mode (in this case the mode of body in particular); 2) there is no causal connection and as such there is no interaction. It is unclear if this is a point that Descartes would encourage based on his correspondence with Princess Elizabeth, in which he insists that mind and its modes are different than body and its modes. Even if we grant that we have built commonality between the two different substances by giving an account of union, this assertion will not suffice because we do not have an account of real causal interaction between mind and body.

Yet another option similar to the one Hoffman takes but which does not advocate for either a union or interaction thesis, can be found in John Cottingham's article "Cartesian Trialism". Cottingham asserts that there are features that belong to the mind alone, the body alone, and features that belong to the united human being alone. These latter features are sensation and imagination.[36] These faculties do not quite belong to the mind alone or the body alone; thus, we must have a third category that accounts for these faculties. According to Cottingham, a third category along with the already established dualistic account would, improve the Cartesian philosophy. But as Cottingham himself admits, the notion of a third category of substance is not something Descartes himself advocated, nor is it a notion that subsequent Cartesian thinkers promoted. Moreover, it has the pitfalls of Hoffman's account which violates Descartes's real distinction and substance dualism.

There are other scholars who take on the discussion of interaction (leaving aside issues of the nature of the union) and posit an occasionalistic reading of Descartes, at least in the case of body-body interaction. For example, Garber suggests that according to Descartes, "when I examine the idea of body, I perceive that it has no power [vis] in itself through which it can

[36] Cottingham, 1985, p. 224

produce or conserve itself."[37] Then God, through what Garber calls the impulse view, gives a kind of push or impulse to objects to bring about movement/motion in objects. While he is willing to acknowledge that there are some finite causes in the world, like minds, Garber argues for an occasionalistic view in regard to inanimate objects. Similarly, Hatfield in his article, "Forces (God) in Descartes' Physics" discusses '*force*' in Descartes's texts and states that Descartes is an occasionalist (in that God is doing all the work) in the case of body-body interaction. Hatfield writes,

> Thus in order to preserve the same quantity of motion in the face of constant contact among the various particles, God is eternally giving one particle more motion and another particle less, according to their size and speed, in the manner described by the three laws of motion.[38]

With regard to mind→body cases, Hatfield holds the view that human minds, as well as angels, can act on matter and can be "considered to have an 'extension of power'" on objects.[39]

The premise behind this position is that the passivity of matter and lack of '*force*' in matter that Nadler, Garber, and Hatfield emphasize, leads to occasionalism for Cartesian philosophy, at least for the case of body-body interaction. However, it should be noted that the approaches (either discussion of union alone or interaction alone) pursued by scholars follow a path that Descartes advised would lead to error. As noted earlier, if we are to understand the mind and body union and their interaction it would be a mistake if we were to start with body-body cases, and then based on those findings apply it to the mind-body cases. Thus, I propose a paradigm shift in our approach to understanding causal interaction. Instead of beginning with body-body cases, which will naturally lead us to occasionalism (because matter is agreed by all

[37] Garber, 1993, p. 13
[38] Hatfield, 1979, p. 127
[39] Hatfield, 1979, p. 129

hands to be passive) we should begin by evaluating mind-body cases, and then see if we can construct a general model that may apply to body-body cases. This is one of many reasons that influenced my selection of Louis de la Forge as the thinker to examine for this dissertation, as this is the approach he takes. Scholars have noted La Forge's non-occasionalist approach to mind-body interaction but also have generally interpreted him as taking an occasionalist stance to body-body cases. What scholars have not taken note of, however, is the order of La Forge's examination: he begins with the mind-body cases and then proceeds to the body-body cases. If my suggestion is correct, we will learn from following the order of his argument in the text, develop a general causal model, and use this to assist in the interpretation of the body-body cases, which I grant use occasionalist language.[40]

1.3 Preview of La Forge's Solution to Solving the Dualistic Puzzle

In La Forge's *Treatise on the Human Mind,* he first discusses the union and interaction of mind and body, then moves on to the question of passivity of matter, and ultimately, the cases of body-body interaction. Little has been written on La Forge, and that which has been written attributes an occasionalistic reading to his work, with a focus on body-body interaction. Nadler carefully distinguishes the case of body-body interaction from body-mind interaction in his book, *Occasionalism: Causation Among the Cartesians*:

> while denying that bodies have moving force might commit you to occasionalism in body-body case, it certainly does not commit you to occasionalism in the body-mind case, particularly if you grant that the soul has an active power to produce its own ideas.[41]

[40] La Forge examines the body-body cases in Chapter 16, which have been well commented on by scholars. La Forge's discussion of mind-body cases (chapters13 - 15) have been much less explored (see Nadler discussed below) and seen as separate from the body-body explanation.
[41] Nadler, 2010, p. 67

This very conclusion is what Nadler applies to La Forge's work. Nadler writes, "La Forge adopts this schema of Descartes [remote (occasional cause) for the body and proximate (efficient cause) for the mind]. It is not occasionalism – it is occasional causation, which, for La Forge, is a secondary but real causal relation."[42] The aim of the chapters to come is to evaluate the following received view: that we must be an occasionalist in regard to body-body cases and an interactionist in regard to mind-body cases. I will begin with the evaluation of mind-body cases first then move to body-body cases.

To state another way, according to the received scholarly view, Louis de la Forge is an occasionalist, certainly with respect to body-body interaction, with the possible exception of mind-body interaction, if not a full occasionalist. There is evidence to support this reading in La Forge's *Treatise on the Human Mind*, specifically passages in chapter 16. However, to make the claim that La Forge is an occasionalist is to ignore the entire context of the *Treatise*. In exploring the earlier chapters and the remaining chapters of the *Treatise,* I argue that La Forge is clearly not an occasionalist in regard to mind-body union and interaction. Furthermore, the causal interaction between mind and body is bi-directional. If this is correct, if bodies can act on minds, then this calls into question why bodies could not act on other bodies. My hypothesis is that a solution that is offered up by La Forge on the union and interaction thesis might be applied fruitfully to body-body interaction while maintaining that the general causal account is not occasionalist, but rather conservationist. An occasionalist appeals to God as the one true cause of all events in the world; a conservationist appeals to natural causes while keeping divine

[42] Ibid.

intervention to a minimum. I explain more fully the occasionalist v. conservationist debate in the final chapter.[43]

I argue that La Forge is not an occasionalist for a multitude of reasons. As a steadfast Cartesian, he intends to maintain dualism and give an explanation of union and interaction. For example, La Forge provides us with the criteria of what should be considered a true union; body-body cases do not meet these criteria, and as such should not be used as the exemplar case for mind-body union. La Forge makes a case for particular causes. Union and interaction of mind and body is based on a relation of reciprocal and mutual dependence.

The order La Forge proceeds in is important to gather the general argument of *The Treatise on the Human Mind*. According to La Forge, an account of union must be established first, because it is a necessary condition to then discuss causal interaction between two differing substances. An account of union allows the discussion of causal interaction because the union provides what two substances have in common. However, beyond their commonality, the union thesis does not provide us with an account of causal interaction. Thus, we need both an account of union, *what* two differing substances have in common and an account of interaction, *how* the two differing substances interact. The goal of subsequent chapters is to take on and evaluate the metaphysical question, the causal problem, and the occasionalistic stance that has been attributed to La Forge and by extension to Descartes.

In Chapter Two I will discuss what it means for two things to be united, and more specifically, the criteria they must fulfill in order to be considered a *true* union. I will then show that two differing substances, mind and body, can be united and their union is based on the

[43] Lee, Sukjae, "Occasionalism", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/occasionalism/>.

relationship of mutual dependence. Furthermore, a union based on relations cannot be occasionalistic for the simple reason that if God was solely responsible for all the work, we would not require mutual dependence between mind and body. Followed by a demonstration of why we should take what La Forge offers on the union criterion seriously. Using an analytical tool called Voyant I will show that La Forge's *Treatise* and its union thesis is inspired by Descartes's *Regulae* text (an unpublished text of Descartes' that remained to be unpublished during La Forge's lifetime). More specifically using Collocates, Correlations, Context, in Voyant Tools to demonstrate target pairs 'relative attributes' and 'mutual dependence' often appear together (both terminology from Descartes) and are found in Descartes's *Regulae*.

In Chapter Three I will discuss the interaction of mind and body. I will demonstrate that this interaction is invoked by the relations of mutual dependence and follows the laws of union which are founded on the action and passion dynamic. I will show that the interaction is bi-directional according to La Forge. I will also explicate the four cases of aversion that La Forge offers in assessing the action/passion dynamic as an explanation for causal interaction. Moreover, the causal interaction is not based on occasionalism because there is a bi-directional causal story – mind-body interaction and body-mind interaction.

Finally, in Chapter Four I will address the question of how and if the body-body interaction fits the proposed model of mind-body interaction. Can the same relational connections that are invoked for mind-body interaction also be invoked in body-body cases? According to La Forge, the body-body cases have the relation of proximity and follow the three laws of motion and, while motion stays constant, bodies can determine the *direction* of their movement. This suggests that bodies have some causal role in the movement of other bodies. I will review Nadler's occasional causation (different than occasionalism), La Forge's stance for

conservationism, and determine if it applies to body-body cases or if body-body cases are doomed to fall under the occasionalistic stance, as has been suggested by scholars.

Chapter 2 – La Forge on the Union Thesis

2.1 Introduction to the problem of causal interaction

As we saw in the previous chapter, Descartes famously argues for substance dualism in the Sixth *Meditation* when he states that "I am really distinct from my body, and can exist without it." However, a few paragraphs later, Descartes also claims that the mind and body are intimately united, not merely as "a sailor is present in a ship", but "intermingled with it, so that I and the body form a unit."[44] The problem that arises when we try to make sense of these two doctrines is called the "unity problem". The "unity problem" raises the question of how two distinct substances, mind and body, can be intermingled in a way that is consistent with Cartesian substance dualism. Substance-based solutions to the problem of unity have tended to compromise Descartes's substance dualism in the direction of monism, trialism, or pluralism. Moreover, non-substance-based accounts of the union have tended to trivialize the union by treating it as accidental, reducible or eliminable.

Contemporary philosophers of mind, such as Jaegwon Kim and Paul Audi, who are interested in understanding mental causation, discuss the 'pairing problem.' The pairing problem is typically understood as posing a major problem for Cartesian dualism:[45]

> The *pairing problem* appears to show that part of the explanation of why any given thing stands in the causal relations it does will be that it stands in certain spatial relations to its cause and effects. Since Cartesian dualism denies that mental substances enter into spatial relations, Cartesians are at pains to deny this. [46]

[44] CSM II 56
[45] I will focus on the pairing problem (the union of mind and body) first and then, in chapter 3 address the causation problem between mind and body.
[46] Audi, 2011, p. 1

Audi points out that the pairing problem assumes that the "pairing relation is a metaphysical precondition of causation."[47] But then he goes on to explain that, "I will give reason to doubt that such a pairing relation exists in all cases of causal interaction, even among physical things, and reason to doubt that the presence of a pairing relation is a metaphysical precondition of causation."[48] In other words, Audi has reason to reject the assumption upon which the pairing problem arises, namely, that spatial relations are necessary for *all* causal interaction. Another way of putting this, that is friendly to Cartesian terms, is as follows: *even if* body-body interaction requires proximity, it does not follow that all interactions involving the body, or the mind require proximity. Might there be some other relation or set of relations that underlie different kinds of causal interactions?

2.1.1 The Cartesian Problem of Causal Interaction

For the Cartesian, there are three sorts of causal interaction, and occasionalism was not proposed as an ad hoc solution to the mind-body interaction problem.[49] Other forms of interaction also require explanation: body-body, mind-body, and mind-mind. The so-called Orthodox Cartesians, successors to Descartes, posited three different laws of interaction to account for these different sorts.[50] Louis de la Forge is not generally considered an Orthodox Cartesian because of his alleged occasionalism or partial occasionalism.[51] Yet, La Forge defends

[47] Audi, 2011, p. 3
[48] Ibid.
[49] See T. Lennon, "Philosophical Commentary," in Nicholas Malebranche (1980). *The Search after Truth: With Elucidations of the Search after Truth*, Thomas M. Lennon and Paul J. Olscamp, translators and editors, pp. 810ff.
[50] Robert Desgabets, Pierre Sylvain Régis, and Antoine Le Grand, whom Watson identifies as "Orthodox Cartesians" each talk about the body-body, mind-body, and mind-mind laws of interaction. Watson (1966)
[51] See Steven Nadler, "Louis de La Forge and the Development of Occasionalism: Continuous Creation and the Activity of the Soul" (1998), Steven Nadler, *Occasionalism: Causation Among the Cartesian* (2010), Andrea Sangiacomo, "Louis de La Forge and the 'Non-Transfer Argument for Occasionalism" (2014), Albert G. A. Balz "Louis de la Forge and the Critique of Substantial Forms" (1932), Norman Smith, *Studies in the Cartesian Philosophy* (1987).

cartesian dualism, the union of mind and body, and causal interaction between mind and body, which is importantly relevant for Watson's criteria for Orthodox Cartesianism. In his *Treatise on the Human Mind* La Forge's aim is to,

> …remove from many people's minds the unfortunate tendency to believe that unless their soul were corporeal, it would not have the power to move the body because, they say, it could not do so without touching it … as if motion could be communicated only by impact or as if it were as easy to perceive how one body could move another as it is to see how it touches it.[52]

Commentators often cite passages on body-body interaction in Chapter 16 of *Treatise on the Human Mind* as hard evidence of La Forge's occasionalism.[53] These commentators take body-body interaction as the paradigm, i.e., as a simple and exemplary case of interaction. The simple case is understood as the interaction of the same substance, namely, body-body and perhaps mind-mind interaction. Building from these simple cases scholars have then applied these same rules to the composite or complex case of mind-body—complex because it involves the interaction of two different substances. What is discovered by body-body or mind-mind interaction would then serve as the paradigmatic case to model the mind-body case. Once the body-body case is established as the interaction paradigm, it is an easy task for scholars to apply the same logic to the body-mind case: matter is essentially passive and cannot bring about change or movement in anything—body or mind. Thus established, scholars then reason that all interaction must come from the will of God. This train of reasoning, therefore, establishes occasionalism as the solution for the Cartesian mind-body union and interaction problems.

[52] *Treatise* 144
[53] According to Nadler (2010), "La Forge's occasionalism is quite limited, and that he employs God's constant causal activity to explain only body-body relations" (p. 59).

Other scholars are more willing to acknowledge the volitional powers of the will, but find La Forge's account incoherent or incomplete, and default to the position that the body-body case is the paradigm for causation in La Forge.[54] However, as I hope to demonstrate with the aid of textual evidence from La Forge's *Treatise on the Human Mind* (1666), these alleged paradigmatic cases are not true unions and consequently should not be understood as the paradigm for causal interaction cases.[55] As such, I argue that scholars have taken the wrong approach in trying to treat mind-body interaction as modelled on body-body or mind-mind interaction. Nevertheless, in order to consider interaction of mind-body we must first examine how two distinct substance can be united. The establishment of a *true* union will provide the commonality needed to account for how two distinct things are united. This in turn will set up the foundation needed to construct an explanation of interaction between two distinct things.

In this chapter, I explore La Forge's solutions to the problem of mind-body unity. La Forge offers a promising non-substance-based account in which the union, or basis of interaction, consists in the mutual dependence of the actions of the mind and the motions of the body. This mutual dependence consists in a special relation that allows for the unity of entities like mental substance and physical substance that have no-spatial relations in common. In other words, I will attempt to demonstrate how it is for La Forge that the first approach suggested by Audi that, "non-spatial pairing relations" are possible between non-physical and physical entities.[56] I will show that the union of mind and body is the *true union* and thus the proper

[54] See Nadler (2010), Sangiacomo (2014), Balz (1932)
[55] I take up the problem of causal interaction fully in the next chapter.
[56] Audi takes the second approach which is "to show that no such pairing relation is needed" (Audi, 2011, p. 9). While, Audi's goal is to show that the "pairing problem" is not unique to dualism but rather a problem with causation, I do think that La Forge offers a robust non-spatial pairing relations between the two distinct substances, mind and body, that is worth examining.

model or exemplar for all causal interactions. The existence of this "true union," is, "speaking generally, that the union of a mind and body consists in a mutual and reciprocal dependence of thoughts of one of them on the movements of the other, and in the mutual interaction of their actions and passions…"[57] Nonetheless, the challenge La Forge faces, as does Descartes, is to explain how the mind-body union is not itself a substance, yet can possess a true union that serves as the basis for the causal interaction of the mind and body. Furthermore, using the analytical tool Voyant (providing new quantitative evidence) couple with historical evidence I will demonstrate why we should take La Forge's stance on the union thesis seriously by making a case that La Forge is influenced by an unpublished text of Descartes, the *Regulae*.

2.2 La Forge on kinds of union: a mutual and reciprocal dependence relation

In *Replies* to the sixth *Objections and Replies* Descartes identifies two ways of characterizing a union. And the way in which we come to have an idea of each one of those two different things and their union is either through the "unity or identity of their nature, or else merely in respect of unity of composition."[58] Unity of nature refers to being able to perceive the same substances with all its modes and recognize that it is all part of the same substance. For example, "that which has shape and that which is mobile are one and the same in virtue of a unity of nature."[59] The same can be said of the thinking substance. The thing that understands and wills I perceive as being part of the same substance – mental substance. However, my perception is different "in the case of the thing that we consider under the form of bone and that which we consider under the form of flesh."[60] We cannot have the perception of a human being

[57] *Treatise* 122
[58] CSM II 285
[59] Ibid.
[60] CSM II 285 -286

in virtue of its nature because a human being is not composed of the same substance. Rather, a human being is a composition of both corporeal and mental substance. Descartes writes,

> Thus, however often we find them in one and the same subject – e.g. when we find thought and corporeal motion in the same man – we should not therefore think that they are one and the same in virtue of a unity of nature, but should regard them as the same only in respect of unity of composition.[61]

Since mind and body substances are different and I observe these differences between them, none the less I perceive them both in the same subject. I am not perceiving them based on the virtue of their nature but rather in the case of human being, I perceive them based on their unity of composition. Finally, in a letter to Regius, on January 1642 Descartes writes,

> But if a human being is considered in himself as a whole, we say of course that he is a single *ens per se*, and not *per accidens*; because the union which joins a human body and soul to each other is not accidental to a human being, but essential, since a human being without it is not a human being. But many more people make the mistake of thinking that the soul is not really distinct from the body than make the mistake of admitting their distinction and denying their substantial union, and in order to refute those who believe souls to be mortal it is more important to teach the distinctness of parts in a human being than teach their union.[62]

In the above letter Descartes is offering guidance to Regius in how to respond to denial of substantial forms. In the beginning of the letter Descartes writes,

> …why did you need to reject openly substantial forms and real qualities? Do you not remember that on page 64 of my *Meteorology*, I said quite expressly that I did not at all reject or deny them, but simply found them unnecessary in setting out my explanations? [63]

Descartes does deny the substantial forms and even though scholars such as Paul Hoffman in his earlier work, "The Unity of Descartes's Man" attempt to make a case that Descartes did really

[61] CSM II 287
[62] CSMK 209
[63] CSMK 205

mean to push forward the notion of a substantial union between mind and body by stating that, "I take him [Descartes] to be pointing out not merely that the union is a union of two substances, which he does this is the case, but that the product of the union is itself a substance."[64] Nevertheless the aim of the letter cannot be denied when Descartes writes statements such as, "whenever the occasion arises, in public and in private, you should give that you believe that a human being is a true *ens per se, and not an ens per accidens*…" and if "Voetius asks whether the denial of substantial forms can be reconciled with Holy Scripture…" Descartes is coaching Regius on how to respond appropriately to those who have Scholastic assumptions. Descartes gives direction to Regius by using Scholastic terminology such as, the term substantial union, to avoid further controversy. The above examples showcase that Descartes held the notion of the union. But in the *Objections and Replies* he is merely telling us how we have an idea (or how we have a perception) of a union of two differing substances and in the letter to Regius he is offering guidance on how to respond to the Scholastic using Scholastic terminology. In either example he is not proving *how* the mind and body are united. This is why it is crucial to turn to the Cartesians that came after Descartes death since, thinkers like La Forge were not embroiled in the same battles with the Scholastic philosophy and may have been freer to offer solutions to the Cartesian problems.

> As such, La Forge first provides us with a recapping of what the union is not,
>
> 1) let us reject first of all the idea of any kind of local presence or at least let us try to think of it without any extension, real or virtual.[65]
> 2) let us take care not to convince ourselves that this union, however close it may be, transforms these two substances into a simple substance and the mind thereby becomes material or the body is spiritualized.
> 3) they both remain after the union what they were before it, and they are no less two substances which retain everything which distinguished them from each other from the point of view of their absolute being.

[64] Hoffman, 1986, p. 346
[65] *Treatise* 12

> 4) let us not think that this union is realized by means of whatever makes them opposite and by what they are in an absolute sense. It is much more likely that it is realized by something in which they have some relation, resemblance or mutual dependence.[66]

Then according to La Forge, the union is not based on a spatial (physical) standing, the union does not bring about a third simple substance, dualism is kept even if we have union, and finally the union is not based on the fact that they are just two separate (opposing) substances. But rather the union is based on some kind of relation.

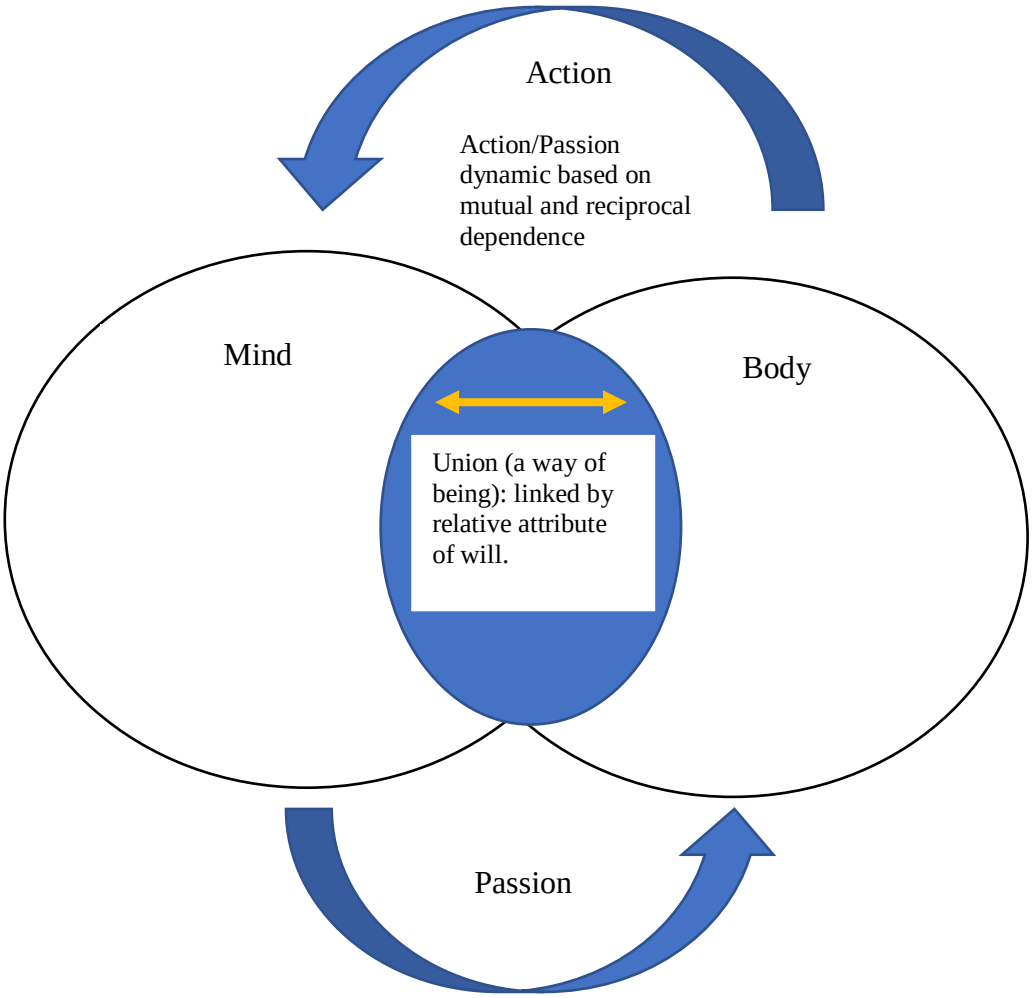
Mind and body are united via their modes which is a way of being based on their relations. La Forge writes,

> There are others even among Mr Descartes's followers who are convinced that the union of mind and body is realized by a certain mode which they call a union, which serves as some kind of link to cement to join the two substances. I have this to say to them, that if they do not think that this mode is something distinct from the mind and body, they are not saying anything which is inconsistent with what we shall propose shortly. For who does not recognize that when the body and mind are united, they are in a mode which is different from when they are not, and that this union is therefore a mode or way of being in relation to both of them? [67]

Then, a mode is a *way of being*. The union of mind and body is a mode (*a way of being*). A different mode than those found simply in mind or body substances, I will call this a *hybrid* mode. Such a mode is unique to the union and only emerges from the union of mind and body. For example, the modes that occur because we are human beings (not just bodies, or not just minds) include appetites such as hunger and thirst, sensations such as color and heat, and emotions such as love and hate. Before going any deeper and to stave off any confusion, Figure 1 illustrates what is to come and be discussed based on La Forge's stance on union:

[66] Numbers 2-4 are from *Treatise* 120
[67] *Treatise* 119

Figure 1



In general, for something to even be considered as a union or what La Forge calls a *true* union it must fulfill two criteria. I will call this the *union criteria.* A union is fulfilled when there is,

> some kind of relation, resemblance, or dependence by means of which we consider two things as in some sense constituting only one … [and] every kind of union implies two things which are distinct from each other.[68]

In order for something to be identified as a union it must: 1) share a relation, resemblance, or dependence which allows two things to be considered as one; and 2) exist between two things

[68] *Treatise* 120 – 121

that are distinct from each other. La Forge considers four potential candidates for true union before landing on one. A union between two things could be between: a) substance-substance, b) substance-essential attributes, c) substance-mode, and d) mode-mode.[69] La Forge writes, "I even think that when we look at it more closely these last three kinds of unions do not deserve the name"— i.e., the name of union in a true sense.[70] Hence, the relationships expressed in b-d, substance-essential attributes, substance-mode, and mode-mode, do not deserve the name of a *true* union. In the case of substance-essential attribute and substance-mode these are "only the same thing as the substance – no more than a union between modes or attributes which occur together in the same simple subject [single substance]."[71] The relationship of substance, attribute, and mode in Cartesian philosophy is that a mode depends on the attribute and an attribute depends on a substance. I cannot have knowledge of the substance without knowing its attributes, but I can know a substance without knowing its modes. When we say a substance is united by way of its essential attributes all we are saying is that the attribute allows us to know that substance. Attributes make substances understandable to the human mind. For example, when we claim to know thinking substance it is because we know its essential attribute – thought. Similarly, when we say to know extended substance, it is because we know its essential attribute – extension in breadth, length, and depth. Knowing the essential attribute of a substance allows us to have knowledge of that substance. Thus, the linkage between substance-essential attribute is not a true union because, we are just talking about the same substance and the second part of the union criterion is not met – i.e., a union of two *distinct* things. In a similar fashion the

[69] Descartes in *Principles of Philosophy* part one refers to substance-mode and mode-mode (modes of the single substance) unions as a modal distinction, while substance-attribute he refers to as a conceptual distinction. Finally, substance-substance union Descartes calls a real distinction.
[70] *Treatise* 120
[71] Ibid.

linkage between substance-mode is not a true union because just like the case of essential attribute we can say we know something about the attribute by knowing the mode. For example, an idea is a mode of thinking and thought/thinking is the essential attribute of a thinking substance. The shape of a rock is a mode of the attribute extension (length, breadth, depth). Substance-mode relations allow us to say something specific about the substance, but they are not different in substance. For example, I can talk about the position and motion (modes) of a stone (extended substance) but we are still considering the same substance. Hence, the substance-mode relation does not meet the second part of the union criterion and as such it cannot constitute a true union. In the case of mode-mode relation, it suffers the same failure as b and c. In Descartes's *Principles of Philosophy,* he states that there are modes of the same single substance that can be differentiated.[72] For example, we can distinguish a stone's shape from its size and texture. Nonetheless, we must realize that they are just modes of the same substance, i.e., extended substance. Size, shape, and texture are different modes of extended substance that do not meet the second criterion of the union thesis and so d) mode-mode unions are not considered as true unions.[73]

Recall that according to La Forge, a true union must satisfy two criteria: 1) share a relation, resemblance, or dependence which allows two things to be considered as one; and 2) exist between two things that are distinct from each other. The joining of body-body (same substance) and mind-mind (same substance) does not constitute true union for La Forge because they are not distinct substances and do not meet the second part of the union criterion. Only a) the union of two different substances, body and mind, fulfills the two criteria for true union.

[72] CSM I 214 – 216

[73] Descartes takes into account mode of mind united to the mode of body and states that, "the modes in question cannot be clearly understood apart from the really distinct substances of which they are modes" (CSM I 214).

In regard to the first part of the union criterion, a union implies some kind of relation, resemblance, or mutual dependence, La Forge examines each feature respectively. Relations "hold between things" and it is relations that capture the origin and termini of the actions and passions.[74] Knowing the relation allows us to know how two things can be united into a single thing, at least in the sense of being able to comprehend such things.[75] According to La Forge the types of relations we can have are threefold: **relations of affirmation**, **relations of negation**, and **relations of origin**.[76] Relations of affirmation refer to the resemblance between two things. According to La Forge,

> The resemblance which should marry a body and mind must therefore be found in their respective properties, that is, in their operations and in the fact that they are capable of acting and being acted on. That is the only way in which one could say that a substance could unite with another, enter into the other or receive it into itself.[77]

The relation of affirmation that founds the first condition of a true union, namely the *resemblance* between mind and body, consists, "in their operations and in the fact that they are capable of acting and being acted on." More must be said about the action-passion relation in the union of mind and body, but for now it is enough to know that La Forge sees action-passion as a relation of affirmation that fulfills the first condition of a true union.

The second relation, the relation of negation, cannot be the relation that unites mind and body because,

> …since it is a relation of contrast or differences based on the diversity of the things which are contrasted, it is obvious that it is incapable of uniting them and that we should not look to this type of relation for the basis of the union of mind and body.[78]

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[74] MacBride, Fraser, "Relations", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/relations/>.
[75] "Every kind of union, as we have said, is a certain relation which in some sense reduces two things to only one and provides us with an occasion of them as just one single thing" (*Treatise* 123).
[76] These are based on Mr Clauberg's relations – *Treatise* 123
[77] *Treatise* 124
[78] *Treatise* 123

La Forge only gives us this brief reasoning as to why union of mind and body cannot be the relation of negation, but it is clear he thinks that negation is a "relation of contrast or differences based on the diversity of the things," and is "incapable of uniting them." La Forge seeks a foundation for mind-body union that is close enough that it is not lost during lethargy, ecstasy, sleep, and deep meditation. However, the relation of affirmation alone is not enough to provide the union. In addition to affirmation, La Forge argues that the mind-body union also requires the relation of origin. The relation of origin is a relation of cause and effect, which allows mind and body to depend on each other mutually: "that is, the actions of the body would cause the mind to be acted on and the actions of the mind would cause the body to be acted on."[79] The union then is based on both the relation of affirmation and the relation of origin. Union of mind and body is based on the relation of action and passion (relation of affirmation) and the mutual and reciprocal dependence (relation of origin).

Furthermore, La Forge tells us that something is related to another by way of their absolute/essential attributes or by their **relative attributes**.[80] He writes,

> But it is obvious that the relation which unites two things is not a resemblance between them in virtue of their essential attributes. For although all bodies are similar insofar as they are extended, shaped and mobile, they are not however all united. The union of all things which are united must be sought, therefore, in their relative or respective attributes.[81]

The relation that allows for two things to be composed and considered as one thing is founded in their relative/respective attributes. These relative attributes in general are established from the action and passion dynamic that the two substances share. La Forge informs us of this when he writes,

[79] *Treatise* 124
[80] *Treatise* 121
[81] Ibid.

> I find none by which two bodies, two minds, or a body and a mind could have some relation, resemblance or dependence apart from, firstly and in general, action and passion, for every kind of being and in every kind of union because, among all the respective [relative] attributes, they alone go out from their subjects and can become attached to others.[82]

Two things to note here: 1) the action-passion relation is one that La Forge sees in all interactions, including mind-body, body-body, and mind-mind interactions; and 2) relative attributes ground all of these unions. The action and passion relation facilitates the back and forth from one subject to the next. In the case of body-body union the link is based on the relative attribute of proximity and the relation of action and passion dynamic is based on their mutual proximity and dependence.[83] Note that proximity does not belong to one or the other body simpliciter, but rather, is a relational attribute in their union. For example, when two billiard balls collide and move, this movement is effected by their proximity and mutual dependence. Suppose body A collides with body B, if the power of body A in its forward movement is less than the resistance of body B (meaning body B is heavier than body A) the motion is retained but the direction of motion is changed relative to body A. The force of heavier body B causes a change in movement because without this force body A would continue its forward motion in a straight line. This change of direction takes place because the two bodies are united, even though not a true union, they share a relationship of mutual proximity and dependence. Similarly, if the power of moving forward in body A is greater than the resistance of body B (meaning now body A is heavier than body B) the collision between the two bodies brings about movement in body B. Here the quantity of motion is equally distributed from body A onto body B bringing about movement. Once again, this movement is made possible because the two united bodies share a

[82] Ibid.
[83] *Treatise* 121 – 122

relationship of mutual proximity and dependence founded in their relative attribute of proximity.[84] For La Forge, the above description of Descartes third law of nature, is captured in the action and passion dynamic effected by their proximity. The union of these two bodies is terminated once the two bodies cease to be near each other or the mutual proximity and dependence between the two bodies is lost once they are no longer sharing the relative attribute of proximity.

In the mind-mind cases, the relative attribute which provides a link of their union is based on love and their action/passion dynamic is based on the relation of reciprocal love.[85] According to La Forge, love allows for two minds to be "perfectly united when they love each other so much that they come to wish for nothing else and have no other thought apart from the love of the other…". There is a reciprocal love between the two minds which allows for the relation of action/passion to take place while the union takes place due to the relative attribute of love. Reciprocal love makes it possible for a relationship of dependence between two minds as one acts and acted upon (and vice versa). For example, in cases of divine, romantic, or sisterly/brotherly love, this union of mind-mind ceases to be once the reciprocal love is gone. Finally, the link which allows for the union of mind-body is based on the relative attribute of will because, "the will goes out of the subject by its actions".[86] The relation of action and passion dynamic for mind and body is based on their mutual and reciprocal dependence, La Forge writes, "speaking generally, that the union of a mind and body consists in a mutual and reciprocal

[84] From Descartes *Principles of Philosophy* part two,
"…when a moving body collides with another, if its power of continuing in a straight line is less than the resistance of the other body, it is deflected so that, while the quantity of motion is retained, the direction is altered; but if its power of continuing is greater than the resistance of the other body, it carries that body along with it, and loses a quantity of motion equal to that which it imparts to the other body" (CSM I 242).
[85] *Treatise* 121 - 122
[86] *Treatise* 121

dependence of thoughts of one of them on the movements of the other".[87] The will provides the linkage between two differing substances of mind and body and it is their relationship of "mutual and reciprocal dependence" which facilitates the "thoughts of one of them on the movements of the other".[88] This union also ceases to be once this mutual and reciprocal dependence is broken with the death of the body. I will examine the interaction of the mind-body and provide examples of their interaction in Chapter Three in my review of La Forge's aversion cases. But, for now, it is enough to note that the *true* union is between mind and body. The relative attribute of will provides a link between the two differing substances (mind and body) and it is based on their relationship of mutual and reciprocal dependence.

To recap, in the case of body-body there is a relationship of mutual proximity and dependence, and in the case of mind-mind there is a relationship of reciprocal love based on their relative attribute of proximity and love which fulfills the first requirement of the union criterion (share some kind of relation or dependence). As already discussed earlier the body-body and mind-mind union does not meet the second part of the union criterion and as such are not considered true unions. While in the case of mind-body union they meet both of the union criteria. It's a union of two differing substances and their shared relationship based on the relationship of affirmation and relationship of origins accounts for the resemblance and dependence that mind and body share. The relationship of affirmation accounts for the resemblance between two things which are related to one another in virtue of their relative attribute. The attribute of the will (in the case of mind and body) facilitates the action and passion dynamic. The relation of origins which enables the will, to go out of the subject by its

[87] *Treatise* 122
[88] Ibid.

actions (the mind) and becomes attached to the other (the body) – providing the linkage that is the mutual and reciprocal dependence.[89] This, facilitates the thoughts of one to the movement of the other and vice versa. Thus, the only *true* union is one found between mind and body. The establishment of union is imperative because it provides the necessary commonality necessary between two distinct substances to set the foundation for examination of interaction between mind and body. Finally, since the union of body-body or mind-mind are not cases of *true* union they should not to be used as exemplar cases. Scholars make a mistake in using cases of body-body (or mind-mind) as exemplar cases to base the union (and ultimately interaction) of mind and body.

According to La Forge, there are six things that we can say in regard to the union of mind and body. First, the union (mind-body) is reciprocal "the body can stimulate various thoughts in the mind and, mind can cause various movements in the body."[90] Second, the union is universal. The entirety of the soul is united to the entirety of the body. Meaning the soul is not united to some parts of the body while excluding other parts of the body.[91] Yet, the union is specific because not all thoughts are dependent on the movement of the body and not all movements are dependent of thought of mind.[92] Thirdly, the union of mind and body is immediate because, "motions of body bring their sensations instantaneously and the soul moves the body as soon as it decides to do."[93] Fourthly, the union of mind and body is stable because, "once nature, or chance, or our will has joined some thoughts of our mind with some of the our body's movements which are especially destined to stimulate the mind's thoughts, a particular

[89] *Treatise* 121
[90] *Treatise* 126
[91] Ibid.
[92] *Treatise* 126 - 127
[93] *Treatise* 127

movement dose not re-occur anymore without the same thought re-occurring in the mind."[94] Similarly the same thought cannot re-occur in the soul without the same movement re-occurring in the body. Fifthly, the union is very close because it is not disturbed by moments of sleep, lethargy, or ecstasy. The interaction of mind and body is not restricted to one or two actions but rather the interaction takes place frequently. The thoughts of the soul which is joined to the movements of the body are based on the confused perceptions of the senses like, hunger, thirst, pain, and the "emotion of desire" which bring the union closer.[95] By contrast, if the thoughts of the soul were joined to the movements of the body on clear and distinct perceptions of the understanding then, the union would be voluntary as opposed to the union being involuntary (more will be said on this below). Sixthly, "this union depends so little on our will" because the will cannot control the duration and time for which the union takes place (it does not control when the body dies, and the union ceases to be). The will does not get to choose the body it is united to and, once united the will cannot leave the body to which it is united to nor change its association to another body. The will cannot avoid the constant flow of perception from the senses. The will cannot avoid being moved by thoughts which bring about movements in the body, all it can do is not to assent to them (especially in cases of involuntary action).[96]

2.3 The union thesis is not based on occasionalist assumptions

Thus far we have discussed what should be considered as a union and once we have identified what is to be considered as a true union, we discussed what provides the link between them and the relative relations that facilitate the action and passion dynamic. However, in the

[94] Ibid.
[95] *Treatise* 128
[96] Ibid.

same chapter that La Forge provides us with an account of union he also makes statements such as:

> …whether the cause this dependence from the will of the mind which is united or derives from another will which is superior to its own.[97]
>
> …likewise we could not conceive clearly and distinctly of anything which could unite the mind and body, or which could attach the thoughts of one to the movements of the other and make them dependent on them, apart from its own will or some other superior will.[98]
>
> …whether it is the will of the mind which is united made it thus dependent or some other will of the mind which is united which made it thus dependent or some other will which made it subject to it.[99]
>
> It must therefore be the will of the mind which is united, or the will of some other mind which has as much power over its thoughts as the mind itself and which unites some of these thoughts with certain movements of the body and determines the manner and duration of the union.[100]

If the above quotes are taken to stand alone it may seem that union of mind and body is based on occasionalism. The occasionalist principle states that that all created things have no causal agency and that God is the source of both the universal and secondary causes. Bodies or minds equally lack causal agency. For example, the mind does not cause the body to take any action and vice versa, bodies have no causal powers over minds to bring about thoughts. God is the one and only true cause bringing about the effects of an event. For example, "when a needle pricks the skin, the physical event is merely an occasion for God to cause the relevant mental state (pain); a volition in the soul to raise an arm or to think of something is only an occasion for God to cause the arm to rise or the idea to be present to the mind…".[101] In the introduction of *Nicolas*

[97] *Treatise* 121 – 121
[98] Ibid.
[99] *Treatise* 122
[100] *Treatise* 125
[101] Nadler, 1992, p.viii

Malebranche Philosophical Selections Nadler identifies La Forge as an occasionalist like his contemporaries Géraud de Cordemoy (1626 – 1684) and Nicolas Malebranche (1638 – 1715).[102]

However, La Forge clarifies his stance and the role God plays:

> It will also be objected that this union would not be natural but merely moral, because it would be merely the result of the will of a free mind. I reply, firstly, that the conclusion is unjustified unless one wishes to claim that when I roll a ball freely, the movement I give it and all the effects which result from that are not natural because they we caused voluntarily and freely by me. But I would want this union to be simply moral when it is the mind itself which is united with a body which has attached its own thoughts to certain movements of the body and which can therefore break or change this union when it seems appropriate. One cannot say the same when the union is not in its power and when the mind does not choose to be or not to be united. On the contrary, when this union results from God's decree by which he decided to govern all creatures in the way in which we perceive they are governed, it should be classified as something which is just as natural as anything else that happens in the world. For what is nature, when the word is not understood as the specific essence of each thing, except the order by which God rules over his creatures? Therefore everything which happens in virtue of this order happens naturally.[103]

As La Forge points out in a case of a ball that I roll down the hill, when the ball does move and its effect, rolling down the hill, I would claim that the ball, its motions, and effects are behaving according to its natural states – the three laws of motions. In the same sense when "God decree[s]" the union to take place between mind and body it is only because God governs all its living creatures in the sense of being their total and efficient cause and not because God wants to cause each and every thought and movement in His created creatures. The union for La Forge is involuntary. Mind and body are not united based on the desires of the will because, if it were free to join or separate according to its will (as a pilot is joined to a ship) the mind would not love nor respect the body. As La Forge puts it,

> …if our mind perceived clearly everything which injures or tickles its body in the same way as a pilot perceives what is beneficial or harmful with his ship; if we experienced the sharpness of the acidic liquid which causes hunger only as he sees the rot which corrodes

[102] Nadler, 1992, vii
[103] *Treatise* 122 – 123

> his vessel, it is certain, I maintain, that this mind would have much more reason to think of itself as something with completely separate interests which is distinct from the body, rather than at present when it is joined from the first moment of its creation without being able to separate from it.[104]

If the union were voluntary (and not decreed by God) then, the mind would think itself as separate and not united so that, when the body felt the discomforts of hunger, thirst, and pain it could disassociate from the body. Additionally, human will can be defective, as such, the establishment of union should not depend on the human will as a defect that can break the union.[105] Furthermore, acknowledging that the union is decreed by God, here La Forge can easily transition into an occasionalist doctrine to solve the union problem that the Cartesian philosophy faces. Rather, La Forge continues to state that God decrees the union because he "governs all creatures" as the author of the created creatures and human beings (as one of His creatures) fall under His creation. The union is not freely chosen by an individual being but rather being united is part of an individual's nature. The *human* mind does not get to choose the body to which it is united. Union is just as natural as anything else that happens in the world. Meaning that even though God created human beings, the union of mind and body occur according to the nature of union and not by some occasionalist doctrine. In addition, once union of mind and body in a particular case is established the will has the freedom to choose which thoughts it will further associates with and which ones it disassociates. La Forge tells us that the will has the power to "link some of its thoughts with some motions of the body with which they were not previously joined, and to dissociate others from those with which they had been joined in order to substitute alternatives in their place."[106] While in a state of union human beings are free to choose (or direct

[104] *Treatise* 128
[105] *Treatise* 133
[106] *Treatise* 129

the motion) of certain thoughts to associate with certain movements. It is not God controlling this association it is the volitional power of the will. Moreover, La Forge spends chapters building and explicating the mutual dependence that mind-body share. Hence, mind-body union is based on shared relations and not based on an ever-acting God.

We have union of mind and body; the union is a hybrid mode (a way of being of the relation between mind and body) which is linked via the relative attribute of will. But it is the relation of mutual and reciprocal dependence that allows for the action of one to be a passion in another. This solution provides an account of union, how two differing substances can be linked but, more importantly, it gives an account that is non-spatial. As such we should take what La Forge offers in *Treatise on the Human Mind* in advancing the union (and ultimately the interaction) thesis earnestly. La Forge's account of union is robust, and it provides an account of commonality between two distinct substances that is lacking in Descartes's account. His influence on Malebranche suggests that he is not a minor Cartesian figure and should be evaluated in his own right.[107] To further substantiate what he offers is significant evidence must be gleaned carefully from the text, analyzed, scrutinized and synthesized.

2.4 Why we should take what La Forge offers in earnest

In this section, I want to offer a different kind of evidence. The attempt will be to demonstrate a correlation between terms used both in La Forge's *Treatise* and Descartes *Regulae* by using an analytic tool called Voyant. Then, via historical evidence I will establish that there is a high probability that the terms used by La Forge came from Descartes's Regulae text. It is

[107] "There is no firm evidence that La Forge and Malebranche met at Saumur; however since Malebranche's conversion to Cartesianism occurred following his reading of Descartes' *Treatise on Man*, which included notes by La Forge, there is an obvious sense in which Malebranche was aware of and was in some way influenced by La Forge's early commentary on the *Treatise on Man"* (Clarke, 1997, p. xv).

evident that La Forge is influenced by Cartesian philosophy, but more is required to show that a very specific text was behind the influence in allowing La Forge to build his account of union and its criteria.[108]

In order to engage in this process of discovery and appraisal of such possible influence, I employed Voyant to aid in identifying certain correlations in the text that would likely not have been discovered with the traditional approach of close reading. The use of Voyant facilitated the finding of quantitative data that is meant to be supplemental to a philosophic close reading and not a replacement. Analytical tools like Voyant can help to quantify data, measure the frequency with which a phrase or word appears in the text, and calculate the relationship between two terms that appear in the text. The generation of new data representations can be helpful in *re-reading* and re-evaluating long-standing texts. The use of an analytic tool coupled with close reading of the text allows room for the comparison of two complex philosophical texts and allows for the engagement of new questions such as, are La Forge and Descartes using the same base term pairs such as 'relative attribute' and 'mutual dependence'?

Since, La Forge's solution to the union problem is that mind and body are linked via the relative attribute of will and have a shared relation based on mutual and reciprocal dependence, I focused my search in Voyant to base term pairs 'mutual dependence' and 'relative attribute' in order to discover if Descartes's text contained meaningful data for comparison. In turn, I used the base term pairs as guidance for selecting which chapters of La Forge's *Treatise* I would use. I started with Descartes's *Meditations on First Philosophy* (1641), which provides the foundation of his first principles, and *The Principles of Philosophy* (1644), which provides the clearest statement of his metaphysical framework and the new mechanistic philosophy in contrast to the

[108] For determination of authorship please refer to "Introduction to Stylometry with Python" https://programminghistorian.org/en/lessons/introduction-to-stylometry-with-python

Scholastic philosophy. I searched these seminal texts to discover what might be the source of influence on La Forge's account of the union thesis. However, neither text provides an account of *how* mind and body are united and interact. This task was left to be completed in Descartes's *Treatise on Man*, or the unfinished parts of *The Principles of Philosophy*. According to Clark, the *Treatise*,

> …began with the following sentence, describing the hypothetical human beings who were to be explain in that work: 'These human beings will be composed, as we are, of a soul and body; and, first of all, I must describe the body for you separately; then, also separately, the soul; and finally I must show you how these two natures would have to be joined and united to constitute human beings resembling us.[109]

But the unfinished *Treatise on Man* only provides an account of the brain and its function and nothing on a schema of how two differing substances are united and interacting. Nevertheless, La Forge claims that had Descartes continued to live he would complete the remainder of his work in the same way as La Forge has laid it out in *Treatise on Human Mind*.[110] Meaning that had Descartes had the opportunity to develop his thesis on union of two differing substances his response would be either exactly or closely resembling the solution that La Forge provides – that the union is a mode of being and that it is linked via the relative attribute of will. According to Wilkin, La Forge states that:

> …there was so little work left to do. "I thought I could pull sufficient material from the works that he himself [Descartes] published to construct their entire work," for Descartes had said just enough in his writings for La Forge to discern "how he would have spoken about it, if he had wanted to write about it."[111]

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[109] *Treatise* xiii
The translation is Desmond Clark's, here is the French:
"Es hommes seront composezz comme nous, d'vne Ame and d'vn Corps; Et il fout que ievous décriue premierement le corps à part, puis apres l'ame aussi à part: Et enfin que ievous monster commnet ces deux Natures doiuent ester iointes & vnies, pour composer des hommes qui nous ressemblent" (Remarques 73).
[110] Wilkin, 2003, p. 59
[111] Ibid.

As La Forge puts it, "no one should object if I quote various passages from Mr. Descartes in this way, since I only claim to borrow his ideas here and to provide a supplement to what he would have said about the nature of the mind at the end of his *Treatise on Man*, if death had not prevented him from completing it."[112] If *Meditations, The Principles of Philosophy* and *Treatise on Man* do not provide an account of how mind and body are united then, why is La Forge confident that his account of the union thesis *is* the one that Descartes would write? The aim of what is to follow is to make a case that La Forge was deeply influenced not just by the above-mentioned Cartesian texts but persuaded by an unpublished manuscript of Descartes's titled the *Regulae Ad Directionem Ingenii*. I argue, based on data collected from Voyant, that there is a correlation between the terms, specifically the base pairs 'relative attribute' and 'mutual dependence', found in both La Forge's *Treatise* and Descartes's *Regulae*. In addition, historical context will demonstrate that La Forge had access to this unpublished manuscript which, allows La Forge to flesh out the Cartesian union thesis.

In Voyant I used the Collocates, Correlation, and Context tools.[113] Using Voyant as an analytical tool, it permits the discovery of quantitative data that allows for the appraisal of whether

[112] *Treatise* 100-101

[113] J.R. Firth introduced the term "collocations" to account for the distinctiveness and frequency with which word combinations occurred. Stefan Evert in, "Corpora and Collocations" defines collocation, "as a combination of two words that exhibit a tendency to occur near each other in natural language, i.e. to co-occur." "Co-occurrence" describes the identification of collocations. Co-occurrence, or "nearness" of two words, can be measured in three different ways. The first approach is surface co-occurrence, where "words are said to co-occur if they appear within a certain distance or collocational span measured by the number of intervening word tokens" (Evert, 2007, p.12). The second approach is textual co-occurrence, which refers to words that appear in the same text unit, such as a sentence, clause, paragraph, or document. The third approach is syntactic co-occurrence, which occurs when words form a direct syntactic relationship. For example, the relationship we find between a noun and its modifying adjective or the relationship between a verb and its object noun are syntactic relationships. The collocates tool in Voyant is using the surface co-occurrence approach to identify the frequency of words that co-occur within the user's defined collocational span. The most common range is three to five words. (Evert, 2007, p. 12) Increasing the collocational span increases the likelihood of finding more numerous instances of the word collocated with the keyword or node. For example, when searching the word "relative" in the *Treatise* with a span of five words the results generated or the collates are, "attribute," "sought," "respective," "obvious," and "means."

there is a linear relationship between the terms in the base pairs 'relative attribute' and 'mutual dependence'. This, then, allows for the evaluation of if the usage of base pairs is similar in both texts. In order to collect quantitative data, I used the Collocation tool in Voyant to collect values of each term and then, determined if the base pairs of 'relative attribute' and 'mutual dependence' co-occurred in both the *Treatise* and *Regulae*. I then confirmed this co-occurrence by referencing the Correlation tool checking for a positive or linear relationship between the base pairs (terms). The Context tool was then used to ensure that the context I was after was the correct one.

Voyant produces amazing visualizations but more importantly it produces meaningful data. According to Voyant, there are 7 instances in which the terms 'mutual' and 'dependence' appear near each other or co-occur. Meaning that there are 7 instances (between both documents, *Treatise* and *Regulae*) that we have the base pair 'mutual dependence'. The terms 'mutual' and 'dependence' co-occur 6 times in *Treatise* and once in the *Regulae*. We can further drill into

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The 'Correlations' tool in Voyant examines and explores the frequency of which terms appear in a given document. The "correlation coefficient is calculated by comparing relative frequencies of terms (relative to each document for the corpus or relative to each segment of document). A coefficient that approaches 1 indicates that values correlate positively, they rise and fall together. A coefficient that approaches -1 indicates that values correlates negatively, frequencies rise for one term as it drops for the other. Coefficients that approach 0 indicate little correlation, positive or negative" (Correlations – Voyant Tools Help) . It assesses the relationship that two terms may have between one another. Voyant tool calculates correlations based upon the Pearson's correlation coefficient. The coefficient calculates the relationship (in this case a linear relationship) between two variables. The two variables are described as term X and term Y (or term 1 and term 2 as found in Voyant). Each variable or terms will have a value of -1, 0, 1. A value of 1 indicates that there is a linear relationship between the two terms, X and Y. For example, I will be evaluating if terms 'relative', 'attribute' (first base pair), 'mutual', and 'dependence' (second base pair) have a linear relationship in both texts. This linear relationship indicates that when we see the value of X increase, the value of Y also increases. A value of -1 indicates that there is an inverse relationship between the two terms—as X decreases the value of Y increases (and vice versa) and as such these are not the base pairs I will be evaluating because there is no relationship. Finally, a value of 0 indicates that there is no direct linear relationship (either positive or negative) between the two terms.

The 'Contexts' (or KWIC – Keyword in Context) tool in Voyant displays the chosen term and the surrounding texts that appear before and after the term. This tool allows for a contextual look at how the given term (or keywords) appear and are used in the different sections of a document. The data (or the gird in Voyant tools) will display the document and section that the term is derived from and will also display the contextual words that surround the term/keywords to the left and right. By default, the display in Voyant will always showcase the most frequently used terms in the document, and it is up to the researcher to know and search for a specific term. The researcher can also decide and control how many surrounding words should appear before and after the term when being displayed. For example, should it be 5 words or 10 words before and after the term to capture the context with which the term is used.

Voyant and find phrases like: "mutual proximity and dependence", "mutual concurrence interaction and a reciprocal dependence", "mutual and reciprocal dependence", and "mutual dependence" co-occur near one another in the *Treatise*. In the *Regulae* the phrase "mutual dependence" also co-occurs. We know that the terms co-occur but is there a relationship between the terms. Does the appearance of one base term increase the appearance of second base term?

For these results I looked at each individual text separately in Voyant.[114] In *Treatise* when looking at base pair 'relative attribute', we have a correlation value of 0.982 (a value close to 1) meaning that as the term 'relative' appears in the text there is an increase in the appearance of the term 'attribute'. There is a linear relationship between the terms 'relative' and 'attribute'. However, a similar relationship does not occur when we search the term 'attribute'. There is no relationship to the base pair 'attribute relative'. Meaning that order of terms matters. The appearance of the term 'attribute' bears no relationship to the occurrence of the term 'relative' but as incidence of the term 'relative' increases so does the occurrence of the term 'attribute'. In the *Regulae* no such relationship can be found between the terms 'relative' and 'attribute'. The linear relationship found in the *Regulae* between the term 'relative' is with the terms 'degree', 'absolute', 'genus'. The term 'relative' denotes a relationship (synonyms are: reciprocal, comparative, etc.) and as such it makes sense that in a logical text as the appearance of the term 'relative' increases

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Results:	**Base pairs: Relative Attribute**	**Base pairs: Mutual Dependence**
Treatise	Correlation value of 0.982 There is a linear relationship The terms co-occur	Correlation value: 0.776 There is a linear relationship The terms co-occur
Regulae	no correlation between the base pairs but the terms do co-occur	Correlation Value: 0.667 There is a linear relationship The terms co-occur

so does the appearances of terms like ‘genus’ and ‘degree’. Thus, there is not a linear relationship between the terms ‘relative’ and ‘attribute’ in the *Regulae* but, the terms do co-occur.

In the case of the base pair ‘mutual dependence’ in the *Treatise* there is a value of 0.776 between the terms ‘mutual’ and ‘dependence’. The value is significant (is meaningfully above a random result) and this value signifies that there is a linear relationship between the terms ‘mutual’ and ‘dependence’. So, that as the term ‘mutual’ increases in the *Treatise* so does the term ‘dependence’. So, there is a linear relationship in the base pair ‘mutual dependence’. In the *Regulae* we find a value of 0.667 between the term ‘mutual’ and ‘dependent’. There is a linear relationship between the term ‘mutual’ and ‘dependent’ so, as one term increases so does the other term. As such, both base pair terms ‘relative attribute’ and ‘mutual dependence’ co-occur in both texts. There is a linear relationship between the term ‘relative’ and ‘attribute’ found in the *Treatise* but not in the *Regulae*. There is a linear relationship between the term ‘mutual’ and ‘dependence’ in both texts.

When Voyant is being used as an analytic tool we can demonstrate correlation between the terms used in both text and that each term occurs near each other in both text but, the limitation of Voyant is that it does not establish causality. Meaning, Voyant cannot tell us if in fact La Forge was influenced directly by Descartes’s *Regulae*, all it can tell us is that analogous terminology can be found in both texts. However, examination of historical evidence can provide the necessary context needed to make a strong case that in fact La Forge’s union thesis was inspired by Descartes’s *Regulae*.

First, some background on this unpublished, unfinished Cartesian text. Claude Clerselier (executor of Descartes’s work) in preparation for the publication of Descartes’s *Treatise on Man*

hires La Forge (physician by practice) to draw illustrations of the brain.[115] Additionally, with encouragement from Clerselier, La Forge provides lengthy comments to Descartes's *Treatise on Man*, which Clerselier used to publish, *L'Homme de Rene Descartes et un Traitte de la Formation du Foetus du mesme autheur, Avec les Remarques de Louys de la Forge, Docteur en Medicine, demeurant a La Flèche, sure Le Traite de Rene Descartes; & sur les Figures par Lucy Inventees in 1664.*[116] In the *Remarques* Clerselier, "even esteems that Gutschoven and La Forge 'succeeded better than Mister Descartes'" in essentially inventing figures needed for the manuscript.[117] Furthermore, according to Clerselier, in cases where it was unclear what Descartes's figures were supposed to portray, La Forge,

> …"was bolder; and to show everybody that he is no slave to Mister Descartes's opinions, and that if he sometimes adopts them, it is only by deference to reason and not to authority, he did not hesitate to stray here from the Author's thought, and to substitute his own in its place". Clerselier's (very Cartesian) approval of La Forge's disregard for authority and authenticity...[118]

La Forge never afraid to portray an accurate account of the anatomy of the brain even if he felt Descartes's had gotten it wrong. In the process of aiding Clerselier with the publication of *Remarques*, La Forges notices gaps in the Cartesian philosophy, that Descartes explains succinctly all the functions which occur in man except the perceptions of understanding and determination of the will.[119] In writing the *Remarques*, Clerselier gave La Forge access to all of Descartes's works in order for him to have a firm understanding of the Cartesian philosophy. Hence, one can assume this included access to both published and unpublished works of Descartes – works like, *Regulae*

[115] According to Wilkin (2003) La Forge was, "a regular, like Clerselier, at the Scientific conferences hosted by Henri-Louis Hébert de Montmor and a self-described 'disciple of Mister Descartes'" 42.
[116] *Treatise* xiii-xiv
[117] Wilkin, 2003, p. 50
[118] Ibid.
[119] *Treatise* 153

ad Directionem Ingenii (*Rules for the Direction of the Mind*). This is not an implausible assumption since there are historical facts that corroborate that Clerselier shared the manuscript with other Cartesian scholars of the time. For example,

> …in the second edition of the Logic of Port Royal (1664) the philosophical logicians Antoine Arnauld (1612 – 1694) and Pierre Nicole (1625 – 1695) employed an extensive extract, translated into French, from Rules XIII and XIV of the Regulae – indicating that Clerselier had provided the manuscript.[120]

The *Regulae* was published in "Holland in 1684, and the first Latin edition was published in Amsterdam by P. and J. Blakey in 1701.[121] *Regulae*, written between 1626 – 1628 was never published during Descartes' (or La Forge's) lifetime.

> In the inventory of Descartes' papers made at Stockholm shortly after his death in 1650 the work is listed as 'Nine notebooks bound together, containing part of a Treatise on clear and useful Rule for the Direction of the Mind in the Search for Truth'. [122]

The text was to comprise three parts, each part containing twelve rules. The text we have today is incomplete and it comprises a total of twenty-one rules.[123] However, there is no historical documentation from Clerselier that substantiates La Forge's access to the *Regulae*. And neither does La Forge himself cite directly from the *Regulae* in his *Treatise*. Nevertheless, familiarity with both texts permits one to see the influences of the *Regulae* on La Forge's *Treatise*. Yet, knowing that La Forge had access to the manuscript is not enough to make the case that he was inspired by Descartes's *Regulae* when forming his union thesis. However, knowing that La Forge had access

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[120] Descartes, R.(1998). *Regulae ad directionem ingenii: Rules for the Direction of the Natural Intelligence*. A Bilingual Edition, ed. And trans. By George Heffermen. Leiden, The Netherlands: Brill/Rodopi

[121] CSM I 7

[122] Ibid.

[123] "The second set of twelve rules is incomplete, ending at Rule Twenty-one, and only the headings of Rules Nineteen to Twenty-one are given. The final set of twelve Rules is entirely missing; it appears that Descartes left this project unfinished. The first twelve Rules are concerned with simple propositions and the two cognitive operations by means of which they are known, intuition and deduction. The second set deal with what Descartes calls 'perfectly understood problems; i.e. problems in which the object of inquiry is a unique function of the data and which can be expressed in the forms of equations" (CSM I 7).

to the document via Clerselier coupled with the quantitative data collected from Voyant allows us to make the claim that La Forge's union thesis was persuaded by what he read in the *Regulae.*

2.5 Conclusion

Based on the union criteria La Forge sets out, I have established that the *true* union is between mind and body. Since union is needed and crucial in providing the commonality between two distinct substances in order to discuss causation (interaction), the exemplar case should be mind-body and not body-body. Mind and body are linked via the relative attribute of will and share a relationship of mutual and reciprocal dependence. The union is a hybrid mode – a way of being of the two substances if and when they are united. Because the union of mind and body is based on a common relation, a causal relation between mind and body is also possible. Finally, combining the use of an analytical tool (Voyant) with our traditional close reading approach we are able to *re-read* Descartes *Regulae* and La Forge's *Treatise* and gain a new and valuable perspective. Such use of tools initiates the discussion of why we should take La Forge's union thesis seriously and to recognize that the inspiration of union thesis come from Descartes's *Regulae*. This is important because the *Regulae* was never published during La Forge's lifetime.

Chapter 3 – Interaction of Mind and Body

3.1 Introduction to the problem of Mind-Body Interaction

If Cartesian dualism is accepted, mind and body are distinct and separate entities and it is unclear how an immaterial thing can affect a material thing and vice versa. This problem of interaction is captured in a letter from Princess Elisabeth on 6 May 1643,

> So I ask you please to tell me how the soul of a human being (it being only a thinking substance) can determine the bodily spirits, in order to bring about voluntary actions. For it seems that all determination of movement happens through the impulsion of the thing moved, by the manner in which it is pushed by that which moves it, or else by the particular qualities and shape of the surface of the latter. Physical contact is required for the first two conditions, extension for the third. You entirely exclude the one [extension] from the notion you have of the soul, and the other [physical contact] appears to me incompatible with an immaterial thing.[124]

As aptly described by Princess Elisabeth, it is not clear how the observed effects (movement of bodies and more specifically voluntary actions) are caused by the soul/mind (a thinking substance). For it seems that the determination of all movement comes to be by 1) impulsion, 2) propulsion and 3) modes of an extended body such as shape or size. In the first and second cases, physical contact is required; for example, the two objects must touch if one is to push or pull the other. In the third case, extension and its modes are required to affect the motion or direction of motion of other bodies. According to Descartes, the soul (thinking substance) is devoid of all material properties and incapable of spatial relationships, so it is not clear how the cause or determination of motion could ever be the soul.

[124] Descartes, René and Princess Elisabeth of Bohemia, 2007 (*The Correspondence Between Princess Elisabeth of Bohemia and René Descartes*. (Ed. and Trans. by Shapiro, Lisa)), p. 62

Nevertheless, according to La Forge, the mind/soul has the power to move the body and the body has the power to stimulate various thoughts (ideas) in the mind as the "necessary consequences of the union."[125] The mutual and reciprocal dependence *is* the interaction that takes place between mind and body. Due to their mutual dependence, certain actions of the body cause the mind to be acted on (passions) and certain actions of mind cause the body to be acted on.[126] Due to this reciprocal dependence "the body stimulates various thoughts in the mind, but the mind can also cause various movements in the body."[127] Although there is nothing in the nature of body that can force the mind to depend on its thought and there is nothing "either in motions and thoughts in general or in motions and thought in particular" which joins a certain thought with a certain motion, at least not necessarily, we can turn to the nature of both mind and body for the causal source between "a particular thought and a particular movement."[128] Thus, according to La Forge, the mind-body union, which establishes the mutual dependence of particular thoughts of the mind with particular motions of the body, constitutes the interaction of mind and body.

The nature of the mind, as we shall examine below, is such that the power of the soul/will can and does determine the motion and direction of the animal spirits which in turn bring about movements in the body. For example, if someone desires to eat, the will conjures thoughts of chocolate cake which in turn produce corresponding patterns on the pineal gland such that the person takes the action of pursuing and eating chocolate cake. Likewise, the body by its very nature communicates motion through the animal spirits to the mind and brings about thoughts in the mind. For example, if someone is pricked by a pin, the animal spirits course through the

[125] *Treatise* 150
[126] *Treatise* 124
[127] *Treatise* 126
[128] *Treatise* 125

body and produce a pattern and motion on the surface of the pineal gland such that the sensation of pain is produced. This particular motion-sensation pair is established by nature. La Forge further posits that the interaction between a particular thought to a particular body is based on an equivocal cause. Where the effect (various movements of body) does not resemble the cause (various thoughts in the mind). Mind-body interaction takes place indirectly and not directly; in that the mind acts on the body by means of forming ideas, and the body likewise acts on the mind by means of producing ideas. In other words, the mechanism of interaction is the idea-motion pairs that are established through the union at birth or through habit and experience. The union is based on the mutual and reciprocal dependence of mind and body which gives rise to an action and passion dynamic. The body is acted on when it is directed by the mind and acts when it produces certain ideas in the mind; the mind acts upon the body when through the determination of its will produces movements in the body.[129] Thus, La Forge answers the questions posed by Princess's Elisabeth in her letter to Descartes by giving an account of how the will is the cause that "determine[s] the bodily spirits".

The aim of this chapter is to build on La Forge's account of union in the previous chapter and explore in detail what La Forge offers as the cartesian account of causal interaction between mind and body. La Forge introduces two kinds of particular (secondary) causes – a corporeal and a spiritual cause – that he posits to explain how particular bodies interact with other bodies and minds. I will explore how La Forge thinks particular causes work and assess whether or not they are real causes. This will allow me to evaluate the claim of occasionalism in La Forge. I will argue that his general account of causation is non-occasionalistic, as exemplified in his account of mind-body interaction. The more difficult case of body-body interaction will be

[129] *Treatise* 124

taken up in the next chapter. In Section 2, I will explore causal interaction in La Forge's work, by examining his account of universal causes, particular causes, laws of union, and the bi-directional nature of mind-body interaction. In Section 3, I will explain how the laws of union work and cover some key examples such as aversion. Finally, in Section 4, I will evaluate why La Forge's general model of causation is non-occasionalistic and assess its merits.

3.2 What is Causal Interaction for La Forge? Particular Causes and Laws of Union

3.2.1 Types of causation and causal relation

In his book *Occasionalism: Causation Among the Cartesians,* Steven Nadler discusses the concept of "occasional causation" as a general model of causation of which occasionalism is merely a species. The confusion of occasionalism with occasional causation has led to misinterpretations of the Cartesian account of body-body and mind-body interaction. As Nadler puts the point, "certain thinkers who employ occasional causation to explain a given set of relations are often mistaken for occasionalists."[130] Occasional causation (not occasionalism) should be the model of causation used to evaluate Cartesian philosophy. To make this case, Nadler contrasts occasional causation with another seventeenth century causal theory known as transeunt efficient causation. Transeunt casual model asserts that:

> Generally speaking, one substance, event, or state of affairs, *A*, is the efficient cause of another substance, event, or state of affairs, *B*, if *A* is the immediate and direct (or proximate), primary agent of change with respect to *B*, and is responsible for bringing about *B* through its own inherent efficacy or power.[131]

A is the *immediate* and *direct* cause of B only if there is no intermediator (either event or a thing) between the cause and effect. For example, if a tennis racket hits a ball, and the ball hits a

[130] Nadler, 2010, p. 30
[131] Nadler, 2010, p. 30-31

window, the tennis racket's causal relationship to the broken window is indirect. The effect is mediated by the ball's causal relationship both to the tennis racket and the window.[132] A is a *primary* cause of B when A on its own is enough to bring about B, and it "is not merely a partial or contributing cause or necessary condition."[133] As Nadler explains, depending on how you look at the tennis racket, it can be viewed as a partial or necessary condition for the window breaking. Whereas, the ball striking the window with sufficient force *is* the primary cause (or the sufficient condition) needed for the window to break. This direct versus indirect distinction can be further seen when we say that two entities are related "directly (A → B, where A communicates something to B) or indirectly (A → B → C, where A communicates something to B, which in turn communicates something to C)."[134] Typically transeunt causation was seen as either engaging in real action or providing an influence upon the effect. One species of causation called "emanation" states that the cause possesses what it gives to the effect. Another species called "transference" states that the cause transfers to the effect (for example: heat or motion).[135] In general,

> transeunt or influx causation, something literally passes from cause to effect, either because the cause gives up something to the effect or because it multiplies something of its own to share with the effect.[136]

Transeunt efficient causation, the standard model of causation in seventeenth century philosophy, according to Nadler, is not the model found in Descartes or in subsequent Cartesians. Therefore, La Forge in the *Treatiese* does not advocate for transeunt efficient causation as the model to solve the Cartesian problem of interaction. Like Descartes, La Forge

[132] The example is taken from Nadler
[133] Nadler, 2010, p. 31
[134] Nadler, 2010, p. 33
[135] Nadler, 2010, p. 32
[136] Ibid.

adopts a strict dualism of mind and body, while also asserting that mind and body causally interact. Nothing is exchanged, transferred, nor is a third thing created when mind and body causally interact.

Nadler explicates a model of "occasional causation," which he sees as a competing model to "transeunt efficient causation," in the seventeenth-century debates concerning causes. According to Nadler,

> By contrast, what I am calling "occasional causation" does *not* require any substantial likeness between cause and effect and does *not* involve any kind of influx or communication. In the technical sense of the term, then, no real *influence* occurs between cause and effect. But occasional causation *does*, however, constitute a real causal relationship and not just accidental, sequential conjunction. Thus, in a somewhat broader (hence, weaker) sense, there is an "influence" of cause upon effect, but not of a transeunt efficient nature.[137]

Nadler's description of "occasional causation," has two important attributes: its occurrence does not require resemblance or likeness, nor does it require communication of motion in order to be a genuine causal relationship. Removing resemblance and communication of motion from this kind of causation opens up the possibility that mind and body could stand in genuine causal relation. In "occasional causation" one thing or entity brings about an effect by inducing another thing or entity to employ its own efficient causal power. The term "occasional causation" represents the process where, A, occasions another thing, B, to cause *e* – "even though it is *B* that *A* occasions or incites to engage in the activity of efficient causation in producing *e*, the relation of occasional causation links *A* not just to *B*, but also (and especially) to the effect, *e*, produced by *B*."[138] In this scenario A is the occasional cause of *e* and not B, because A occasioned B to

[137] Ibid.
[138] Ibid.

cause *e* – A is the occasional cause of *e*.[139] The occasional cause (A) stands in a "nomological correlation" to the effect (*e*). This relationship is governed by the psycho-physical laws of mind and body union. The occasional cause is such that it "unites one thing or state of affairs with an effect wrought (through efficient causation, immanent or transeunt) by another thing."[140] For example, in the body-mind interaction, the motions in the body (A), elicit the mind (B - as the primary and proximate cause) to produce ideas (the effect). The mind, is the immanent cause, "… since ideas are nothing than modifications or properties of the mind itself, [and] the process involved when the mind produces an idea would be an *immanent* efficient causation."[141] However, Nadler does not provide a similarly clear account of what (if any) causal relationship A has to B. What Nadler tells us is that, "A does not occasion or elicit B's causal power by action on B as a transeunt efficient cause."[142] A occasions and elicits B to use its (B) causal power to engage in the activity of, efficient, immanent or transeunt causation to produce the effect. The process of occasional causation links A to B but how they are linked is not clarified by Nadler. However, La Forge's account of relations (as discussed in Chapter Two) can fill in the gap and provide an explanation of how A and B are linked. Accordingly, A (motions in the body) elicits → B (the mind) as the primary and proximate cause produces the → *e* (ideas). Where A (motions of bodies) are linked to B (the mind) based on their shared relationship of

[139] Nadler uses an example from Descartes's *Comments on a Certain Broadsheet* to make his point. Where in this example the promise of compensation is the occasional cause of the work produced by laborers.

> "…something can be said to derive its being from something else for two different reasons: either the other thing is its proximate and primary cause, without which it cannot exist, or it is a remote and merely accidental cause, which gives the primary cause occasion to produce its effect at one moment rather than another. Thus workers are the primary and proximate causes of their work, whereas those who give them orders to do the work, or promise to pay for it, are accidental and remote cause, for the workers might not do the work without instructions" (CSM I 305).

[140] Nadler, 2010, p. 33 - 35
[141] Nadler, 2010, p. 44
[142] Nadler, 2010, p. 33 - 35

mutual and reciprocal dependence which sanctions A to elicit B as the primary and proximate cause to produce the effect – ideas. Where the relationship of mutual and reciprocal dependence accounts for what A and B have in common while the laws of union accounts (discussed below) for how motions in the body, via the mind, generate ideas. Additionally, the above explanation can be applied to body-body cases to account for movement; A (one body) → B (another body) → *e* (effect – motion). Where body A is linked to body B via their shared relation of mutual proximity and dependence and as such body A elicits body B as the primary and proximate cause (only as determining the direction of motion and not as a transeunt cause but as an immanent cause (as will be discussed in Chapter 4) to produce the effect – motion. Where the type of motion will be dependent on the three laws of motion. For example, if body A is heavy, then there will be less resistance in body B and there will be greater motion in body B and if body A is lighter, then the resistance in body B is greater and the motion will be slight. Based on both Nadler's model of occasional causation and La Forge's account of relations, bodies have agency to determine and direct motion. Furthermore, A and B are finite beings and "if *A* and *B* are finite beings, then at least one finite being in this setup, *B*, has efficient causal efficacy."[143] This is an important point because in the bidirectional interaction of mind-body and body-mind (as we shall see below) body too (not just minds) will be in a position of being the total and primary efficient cause of an effect *e*.

"Occasional causation," according to Nadler is not occasionalism, although occasionalism is a species of "occasional causation." Occasionalism entails that created things – minds and bodies – have no causal agency and no power to bring about change in another entity. According to the thesis of occasionalism, bodies do not cause effects in other bodies nor in

[143] Nadler, 2010, p. 35

minds, and similarly minds do not cause effects in bodies nor within themselves. God is the one true and efficient causal agent, "He is immediately, proximately, and solely responsible for all natural events or state of affairs."[144] Thus, the pricking of a needle in my fingertip is not the true cause of the pain I feel, rather, it's merely the "occasion" for "God to cause a painful sensation in my soul, in accordance with the laws of mind-body union."[145] Nadler notes that occasional causation has no such entailment:

> [it does not] require God to be the being, *B*, whose causal power is occasioned by *A*. The relationship between occasional causation and occasionalism is that between *genus* and *species*. Occasionalism represents one species or variety of occasional causation, namely, that species in which the proximate and efficient cause whose operation (through efficient causation) is elicited by the occasional cause is God.[146]

In addition, Nadler tells us that according to occasional causation, A is not an efficient cause, "*A* is neither the primary efficient cause of *e* nor a contributing or partial efficient cause of *e*…*B* is the total and primary efficient cause of *e*."[147] Thus, A (as the occasional cause) of *e* does not function as an efficient cause, either in a direct sense (A → *e*) or in an indirect sense: (A → B → *e*).[148] Nevertheless,

> occasional causation – and, in particular, the relation of occasioning that elicits the operation of efficient causal power in the primary cause – is still a *real* causal relation, albeit an inferior or secondary variety if efficient causation is taken to be the standard.[149]

Occasional causes do not initiate the causal chain as do transuent efficient causes, and occasional causes are not accidental or coincidental either. In other words, if occasional causes where not present the process would not proceed as usual – occasional causes are necessary and have a role

[144] Nadler, 2010, p. 34
[145] Ibid.
[146] Nadler, 2010, p. 35
[147] Nadler, 2010, p. 35 – 36
[148] Nadler, 2010, p. 36
[149] Ibid.

to play or have casual efficacy. Occasional causes do not operate like transeunt causes as in cases of transference or emanation rather occasional causes participate in a "nomological correlation."[150] In the case of mind-body interaction, the nomonological correlation is based on psycho-physical laws of mind and body union.[151] However, Nadler concedes that this correlation remains unclear. What we do know is that the correlation between A → *e* is not based on "rerum natura" that is,

> the relationship is not grounded in some ontically real power in *A*. This, I suggest, is what distinguishes occasional causation from efficient causation, where the lawlike correlation is based on some power intrinsic to the (efficient) cause (the correlation between *B* and *e*, for example, is grounded in *B*'s active power to cause *e*).[152]

Hence, the term "occasional causation" designates the process of A not as a primary efficient or a contributing partial cause of *e,* but rather, as the occasional (secondary) cause of *e* that elicits B (the primary cause) in the operation of its efficient causal power in employing the primary cause. A is the occasional cause of *e* but linked to both B and *e*.

Nadler's account of "occasional causation" provides three beneficial points relevant to the current study. First, it provides another avenue of interpretation for Descartes and the so-called Orthodox Cartesians in their account of causal interaction. Secondly, according to Nadler's account of occasional causes, in cases of mind-body interaction (as will be demonstrated below) bodies can have active powers. The active power of causing movement in limbs as a primary cause and as a secondary cause stimulating ideas (thoughts) in the mind. Thirdly, it adds justification for a critical reexamination of La Forge's *Treatise on the Human Mind* and the standard view that he was an occasionalist. La Forge's stance that the union is

[150] Nadler, 2010, p. 37
[151] Ibid.
[152] Ibid.

based on a relation of mutual and reciprocal dependence sheds some light in the discussion of psycho-physical laws and the relationship between the occasional cause (A) and the primary cause (B). It should also be noted that although Nadler is willing to apply the "occasional causation" model to the mind-body and body-mind cases he maintains the standard view that body-body cases are strict transeunt cases of causation. I examine the case for body-body causation in La Forge further in Chapter Four.

3.2.2 La Forge on Causation

For La Forge there are universal (general) causes that should be distinguished from particular (secondary) causes. For example, all motion that we observe in bodies are caused by "God who is the first, universal and total cause of motion."[153] God is the motive force, "the force which transports a body from one vicinity to another and which applies it successively to different parts of bodies".[154] And as discussed in Chapter Two, the general cause of the union of mind and body is God (via divine will). God is the efficient cause of this union. La Forge considers but then rejects that the soul (human will) itself could be the efficient cause of the union since the will can go outside itself and join itself with something else, but even so, it cannot be the efficient cause of *all* unions. La Forge concludes that God is the cause of this union, "God is therefore the total and proximate cause of the union of thoughts which are found united with the same movements in all human beings."[155] Unfortunately, it is these claims that lead some to think that God is the only causal agent in La Forge's model of causation. La Forge acknowledges God as the universal and efficient cause, but then adds,

[153] *Treatise* 147
[154] *Treatise* 145 – more will be said in chapter 4 in regard to God as the universal cause of motion.
[155] *Treatise* 136

> However you should not say that it is God who does everything and that the body and mind do not really act on each other. For if the body had not had such a movement, the mind would never have had such a thought, and if mind had not had such a thought the body might also never have had such a movement.[156]

God as the author of the universe bestows powers onto the human will to have causal power to bring about movement. Moreover, He creates bodies in such a way to act according to their natures – a nature that communicates motion and stimulates thoughts in the mind. Thus, La Forge states that;

> …bodies and minds as the particular causes of these same motions, not really producing any 'impressed' quality in the way the Schools explain it, but in *determining* and *forcing* the first cause to apply his force and motive power to the bodies to which he would not otherwise have applied it, according to the way He decided to govern himself in relation to bodies and minds; that is, for bodies, according to the laws of motion which are so well explained in Book Two of Mr Descartes's Principles; and for minds, according to the scope of the power which He chose to give to their wills.[157]

La Forge recognizes that in addition to a universal cause there are particular causes. These particular causes are minds and bodies. Mind and body are particular causes that use motion, which itself was created by God, just as mind and body were substances created by God. Mind and body determine the direction and the application of motion, according to the laws of motion and the laws of union which capture the scope of the will's power.[158] The power that bodies and minds have to bring about specific movements consists in this: that the causal interaction between a particular mind and a particular body *determines* motion to take the direction it takes and have the effects it has. The power which the mind has to move a body and the power the

[156] *Treatise* 150
[157] Emphasis added by me - *Treatise* 148
[158] For example, La Forge tells us that the, "soul does not have the power either to increase or decrease the motion of the spirits which exist from the gland; it has the power only to determine them, that is, to turn them in the direction in which they must go in order to execute its will" (*Treatise* 151).

body has to stimulate thoughts in the mind are the direct result of the union established by nature. The union is the, "interaction and reciprocal dependence between the movements of the body and the thoughts of the mind" for La Forge.[159] Thus, there are two causes of the union which are the particular (secondary) causes that La Forge posits. The particular causes of the union *are* the foundation of interaction.

The first particular cause is spiritual, and it manifests itself in two ways. [160] The first is the will's power to determine motions within the physical body and the second is the power of the soul to affect the pineal gland and the flow of the animal spirits.[161] The second particular cause is corporeal which is the specific condition occurring in each human being, their temperaments, its parts, and the configuration of animal spirits.[162] Additionally, mind and body interactions are governed by laws of union. La Forge introduces seven laws of union that capture the parameters within which the particular causes, such as the will have power to attach an idea/thought to the movements of the animal spirits, in order to bring about movement and passions.[163]According to

[159] *Treatise* 150
[160] *Passions*: Article 18: "Our volitions, in turn are two sorts. One consists of the action of the soul which terminate in the soul itself, as when we will to love God or, generally speaking, to apply our mind to some object which is not material. The other consists of actions which terminate in our body, as when our merely willing to walk has the consequence that our legs move, and we walk" (CSM I 335).
[161] *Treatise* 136
[162] This refers to third law of union (see below).
[163] At first La Forge introduces these seven laws as articles, the "general and particular causes of this union and about how it is realized in each human being, since that depends on the articles of the union of mind and body, I must try to explain these first" (*Treatise* 134). But further into the *Treatise*, La Forge switches and calls the seven articles as laws of union. La Forge writes, "in accordance with the laws of union of body and mind, the ideas they provide of things which can be senses or imagined are confused or distinct, depending on what they are ideas of" (*Treatise* 161). And when discussing the faculty of imagination La Forge writes, "For in order to discourse and reason and to engage in operations of pure understanding the soul must be able to control its own thoughts, stop them, extend them and apply itself to whatever object it wishes. It could not do this as long as it is incapable of turning the gland from places from which it receives these species nor prevent it from being attentive to them, in accordance with the laws of its union with the body" (*Treatise* 172).

La Forge, since, mind and body are really distinct substances it would make sense that they were governed by laws of union in regards to their interaction.[164]

Laws of union can be understood in comparison to the laws of motion. God, "who prescribed certain laws for himself in governing the world at large should also have made some particular rules for the conduct of the world in miniature, which he established as a kind of microcosm of the macroscopic world."[165] These laws of unions are set by God (since, union is not voluntary and decreed by God) and as such He set laws to govern them. The laws of union are:[166]

> 1) every motion of animal spirit[167] will be accompanied by a certain idea which will cause the mind to have a certain thought.
>
> 2) each of these configurations will be joined naturally to only one idea or one thought which will always accompany it.
>
> 3) this thought will correspond to the state of the body, that is, it will be happy or sad, confused or clear, depending on the disposition in which it found the body the first time and the condition it is usually in when the configuration to which this thought is joined is stimulated on the gland.[168]
>
> 4) the soul would not have the power to separate this thought from the configuration of the animal spirits' motion to which it is naturally joined.
>
> 5) the mind's thoughts which have the body as object would be accompanied reciprocally by the configuration and pattern of the flow of animal spirits.
>
> 6) the movement which would have once accompanied a thought would always accompany it, so that they could not subsequently separate unless the soul itself changed the customary connection.

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[164] *Treatise* 134
[165] Ibid.
[166] Ibid.
[167] "…a certain very fine air or wind which is called the 'animal spirits'" (CSM I 330).
"For what I am calling 'spirits' here are merely bodies: they have no property other than that of being extremely small bodies which move very quickly…" (CSM I 332).
[168] Ibid

7) this union will last as long as the heart can send animal spirits towards the gland and the gland in turn can send them to the muscles through the nerves.[169]

Accordingly, these laws are demonstrated by experience, not mathematics.[170] For example, La Forge states that what he has to say about the "seat of the soul" will prove the first law. The part of the human body that is united to the mind which allows for the "concurrence and mutual dependence of the thoughts of one and the movement of the other" is facilitated by the principal seat of the soul or the pineal gland.[171] La Forge writes, "you remember well that this gland is the principal seat of the soul and the point at which their mutual communication begins and ends."[172] As such the pineal gland functions as the intermediary between mind and body so that animal spirits (accompanied with a certain idea) cause the mind to have a certain thought. The second and third laws are proven when we consider phantom limb phenomena. Those who still

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[169] Law seven is a combination of articles (5,6, 7, 8, and 9) found in Descartes's *The Passion of the Soul*. To construct law seven La Forge used:
Article 5: "Thus it has been believed, without justification, that our natural heat and all the movements of our bodies depend on the soul; whereas we ought to hold, on the contrary, that the soul takes its leave when we die only because this heat ceases and the organs which bring about bodily movement decay" (CSM I 329).
Article 6: "So as to avoid this error, let us note that death never occurs through the absence of the soul, but only because one of the principal parts of the body decays" (CSM I 329).
Article 7: "Finally, it is known that all these movements of the muscles, and likewise all sensations, depend on the nerves, which are like little threads of tubes coming from the brain and containing, like the brain itself, a certain very fine air or wind which is called the 'animal spirits'" (CSM I 330).
Article 8: "This fire is the corporeal principle underlying all the movements of our limbs" (CSM I 331).
Article 9: "It is also the sole cause of the movement of the blood, making it flow constantly and very rapidly in all the arteries and veins, so that it carries the heat it acquires in the heart to all the other parts of the body, and provides them with nourishment" (CSM I 331).

[170] Ibid.

[171] *Treatise* 134 – I will not be discussing the merits for the argument that the seat of the soul is the pineal gland in this dissertation/chapter since it is out of scope of my research. Nevertheless, this is what La Forge has to say in regards to the seat of the soul: "Let us conclude therefore that the principal seat of the soul must be a simple, unique and moveable part and also as close as possible to the source of animal spirits…But I hold that the principal, most important and original source is around this little gland called the pineal, because it is around it that most of the arteries of the choroid plexus are spread and it is in it that the most subtle particles of the blood which they discharge begin, passing through its pores, to assume the form of animal spirits…It is therefore the only part which we can most reasonably take as the principal seat of the soul, not only because it is simple and unique, whereas all organs of sensations are duplicated, but also because it is movable and is surrounded on all sides by the arteries of this choroid plexus. Thus it is in the center of the source of animal spirits…However I must advise the reader at this point that the other things that I have proposed about the union of mind and body and connection between thoughts of one and the movements of the other do not depend on the truth of this view. Even if it were false, what I have said about the other matters would still be true" (*Treatise* 137 – 142).

[172] *Treatise* 151

experience the feeling of an itching sensation even though their leg is amputated. As La Forge says, the feeling of needing to scratch is because the "same thought is always joined with the same bodily movement" even though the limb is no longer there.[173] The fourth law refers to the simple and confused "feelings which are caused by the action of objects on our senses" which we have no control of experiencing.[174] And since we have no control over how we experience objects we also have no control over how a thought is linked to configuration of animal spirits. The fifth law is experienced every time we use the faculty of imagination, memory, and move our limbs.[175] The sixth law will be better demonstrated when cases of aversion are discussed below. Habituation is either broken or reinforced by nature (at birth or by experience) or by the soul when it exercises its power to keep or stop the connection between a movement and a thought. Finally, the seventh law addresses that this union between mind and body will continue as long as the body is alive. Meaning the union ceases to be once the body passes on.[176]

Given the laws of union, La Forge examines the conditions under which volitional powers of the mind (when aware of its activity) obey the laws of union: The will's power as it relates to determination of movement, and the power of the soul as the power the mind has over the movement of the pineal gland and the configuration of the flow of animal spirits. Accordingly, our will,

> does not have power over the muscles alone, but also all the parts where tubes of the nerves terminate – with this difference, however, that it has the power to move our limbs directly by willing to move them, whereas it causes movement in other parts only indirectly.[177]

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[173] *Treatise* 135
[174] Ibid.
[175] In regard to the fifth law he limits himself to "those thoughts which have body as object, because the ideas of spiritual things cannot be stimulated in the mind by sensation, imagination or memory unless the mind has voluntarily linked them with certain words or others physical signs by means of which they can be classified among the species of the imagination and memory" (*Treatise* 135).
[176] Cf. Descartes's claim in Part 1, Article 6 of the Passions of the Soul.
[177] *Treatise* 130

The will regulated to the scope of the physical body versus the power of the soul which "does not extend beyond the brain – beyond the gland and the animal spirits which flow out of it."[178]

It should be noted that the perceptions that emerge due to the unique interaction between mind and body are called "corporeal species." La Forge clarifies that 'ideas' will be used to refer to 'forms of our thoughts' only.[179] While, the term 'corporeal species' or just 'species' will refer to the "particular configurations of the flow of animal spirits and the motions of the gland" and the immediate thoughts these species connect to in the soul.[180] Thus, species are the result of the bending of the gland ("animal spirits, flowing out from the gland in a new way, cause it to bend in that direction") and the configuration assumed at the same time by the flow of animal spirits which are connected to the thoughts in the mind (soul).[181]

As such there are four different causes of corporeal species. The first cause is the action of the senses which refers to the objects that strike the nerve fibers of our senses. The second cause of these species are memory traces. This is the "facility of pores which have already been opened by the action of objects or by any other cause whatever to reopen a second time."[182] The third cause is actions of animal spirits, "which rise from the heart to the brain."[183] The action of animal spirits depend on the size and shape of the animal spirit (some are finer than others). The quickness of motion with which they exit the heart influences the way in which they exist the gland. Finally, the fourth cause is the power of the soul.[184]

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[178] *Treatise* 171
[179] *Treatise* 159
[180] Ibid.
[181] *Treatise* 160
[182] Ibid.
[183] Ibid.
[184] Ibid.

Power of the soul has the power and the force to "stimulate or destroy the ideas of the imaginable things by, stimulating or destroying those corporeal species on the gland with which these ideas are linked."[185] The power of the soul is immediately joined with the pineal gland which allows for the communication of the decision and commands made by the mind to be communicated to the rest of the body.[186] However, there are limitations to the power of the soul, it cannot increase or diminish the movements of the animal spirits nor does it "extend to pushing the animal spirits out of the gland in the manner required to retrace the corporeal species of something which we wish to think about".[187] Experience teaches us this limitation when we have a hard time imagining something we want to remember. The power of the soul entails the "power of directing and limiting the motions of the gland and thereby the flow of animal spirit, to the extent that the two joining which connect it to the medullar trunk may allow."[188] This scope of the power of the soul explains,

> how the animal spirits, when they meet the memory traces – or the pores by which, when opened, the species of the thing one wishes to think about was traced the first time – they re-open them and, thereby recovering their original configuration, give to the soul the thought it wished to have and the soul can continue with that thought as long as it is in control of its attention.[189]

This point will be touched on in more detail when we examine the different causes/cases of aversions below. Nevertheless, La Forge tells us that experience teaches us that we have perception of external objects and the movements of our body because of impressions that strike the nerves. La Forge notes that;

[185] *Treatise* 170
[186] *Treatise* 171
[187] Ibid.
[188] Ibid.
[189] Ibid.

> all the ways in which these configurations or species can be stimulated, only those which depend on the presence and action of objects belong to the senses. All the others whether produced by the will, memory, or the action of the animal spirits, fall within the scope of the imagination.[190]

Besides the species which are initiated by external objects all other species are a product of the imagination – a faculty that is a direct consequence of the union and interaction of mind and body. Furthermore, La Forge tells us that,

> it is appropriate at this point to examine and compare these corporeal species with one another because we notice that, in accordance with the laws of union of body and mind, the ideas they provide of things which can be sensed or imagines are confused or distinct, depending on what they are ideas of.[191]

Recall that the fifth law of the union states that: "the mind's thoughts which have the body as object would be accompanied reciprocally by the configuration and pattern of the flow of animal spirits" and since, the mind would not have had such thoughts if the body did not have such movements (motion) it makes sense that each thought is joined with an equal and mutual configuration of animal spirit. As such species caused by the "actions which external objects impress on the nerve fibers" are the most distinct of all species because they have an object (unless lacking in some way) as their object.[192] Species that are stimulated by the will on the gland are the most sharp and distinct because it is the will looking into itself and applying its own "initiative to think about some particular physical thing."[193] The species reproduced by memory traces are the most distinct because, "pores which preserve these traces happen to re-open of their own accord, as a book re-opens by itself at a place where it was frequently

[190] Ibid.
[191] Ibid.
[192] Ibid.
[193] Ibid.

opened."[194] Finally, the species that are caused by the action of the animal spirits are the most confused because, the flow of spirits are "irregular, least uniform and least constant".[195] Flow of animal spirits are contingent on various causes; for example the condition of the body, the temperament of the individual, and in cases of memory traces how frequently have the pores opened for the animal spirits to pass through.

These impressions are then carried to the pineal gland where with the aid of the soul registers what it is perceiving (the idea/thought that is connected to the corporeal species present on the gland). Thus,

> However a strong soul can eventually erase or at least obscure a sensory impression by applying itself to think about other things, thereby turning the gland a little from the position from which it receives the sensory species. But that happens only rarely and as a result of a long and difficult struggle.[196]

Hence, La Forge holds the belief that those who have cases of aversion (regardless of the cause) are likely subject to those aversions for a lifetime.[197] For, in order to change the aversion, one must change the association of corporeal species with the thought that brought on the aversion and while not impossible, the process is difficult.

The power of the will extends into the tubes of nerves as well as the muscles in the body.[198] This point is important because the determination of corporeal species must reach the pineal gland in order for the will of the mind to be executed. Just like power of the soul, there are certain movements that do not fall under the scope of the will's power. These are movements

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[194] Ibid.
[195] Ibid.
[196] *Treatise* 172
[197] *Passions*: Article 48: "For undoubtedly the strongest souls belong to those in whom the will by nature can most easily conquer the passions and stop the bodily movements which accompany them…The weakest souls of all are those whose will is not determined in this way to follow such judgments, but constantly allows itself to be carried by the present passions" (CSM I 347).
[198] The will does not have the power "to increase to decrease the motion of the spirits which exist from the gland…" (*Treatise* 151).

in the body that do not give rise to a thought in the mind and as such are not the focus of the will. These movements are not subject to the laws of the union. For example, the will does not have the power over our heart beating. It does not have control over the opening and closing the ventricles in the heart. As Descartes's explains in *The Passions of the Soul*,

> …every movement we make without any contribution from our will – as often happens when we breathe, walk, eat, and, indeed, when we perform any action which is common to us and the beasts – depends solely on the arrangement of our limbs and on the route which the spirits, produced by the heat of the heart, follow naturally in the brain, nerves and muscles.[199]

Nonetheless, the will has the power to bring about motions in our limbs directly by willing to move them (voluntary actions). Since these movements take place due to the will's wishes and the determination of the particular configurations of animal spirits, they are subjected to the laws of union. The will has the power to unite a specific thought with the movements of the animal spirit (in the gland) which never had been united previously. [200] More technically, the soul determines "the movement of the gland and the flow of animal spirits towards the side of the brain's ventricles through which they need to exit to descent to the part of the body which it wishes to move."[201] In this way, the will impacts other parts of the body indirectly (as an occasional cause) by executing movement brought on based on passions. While the creation of passions is articulated through the power of the soul found in the faculty of imagination. Again, experience shows us that the

> will does not have the power to open and close the orifices of the heart simply by willing to open or close them, but by exciting in itself the passions with which these kinds of motions are joined, just as it does not have the power to excite a passion by willing to have it but by applying the imagination to think about the object which can cause such a

[199] CSM I 335
[200] "All the ancient physicians believed unanimously that the ventricles of the brain were the place where animal spirits originated" (*Treatise* 139).
[201] *Treatise* 151

> motion, because the spiritual idea is always accompanied by a corporeal species which determines the animal spirits to go into those places by the opening of which the movements which stimulates this passion are produced…[202]

The will does not directly control the beating of the heart, yet it can nevertheless slow down the beating of the heart via the production of passions. The mind can use the will's power via the faculty of imagination to create an image that can excite in itself an emotion (in this case an image of calmness in order to slow down one's breathing and heart beat).[203] This in turn produces a certain passion – in this case the passion of calmness – which in turn brings about (indirectly) the action of the will to slow one's heart beat or breathing.[204] Hence, every idea (thought) is connected with a corporeal species and corporeal species are determined by the will's power to go into certain cavities of the body. Nothing acts directly on the mind (including its will); all things are communicated to the mind via the understanding (the faculty of perceiving). As stated, the understanding is the only gateway for entering the mind and the will is the way in which things exit.

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[202] *Treatise* 130

[203] "Since I understand the faculty of imaging not so much as our power to perceive the ideas of corporeal things, which the various motions of the animal spirits stimulate in the soul, but as the power and force which the mind has over the movement of the gland and the configurations of the flow of spirits by which it can stimulate or destroy the ideas of imaginable things, by stimulating or destroying those corporeal species on the gland with which these ideas are linked…" (*Treatise* 170).

[204] In Article 27 in *The Passions of the soul* Descartes gives a definition of passions while in Article 37 he makes it clearer why animal spirits play a role in the generation of passions.

Article 27: "After having considered in what respects the passions of the soul differ from all its other thoughts, it seems to me that we may define them generally as those perceptions, sensations or emotions of the soul which we refer particularly to it, and which are caused, maintained and strengthened by some movement of the spirits" (CSM I 338 – 339).

Article 37: "Something similar happens with all the other passions. That is, they are caused chiefly by the spirits contained in the cavities of the brain making their way to nerves which serve to expand or constrict the orifices of the heart, or to drive blood towards the heart in a distinctive way from other parts of the body, or to maintain the passion in some other way. This makes it clear why I included in my definition of the passions that they are caused by some particular movement of the spirits" (CSM I 342).

This brings us to the second particular cause – the corporeal (or the body). The thought linked to the movement "would coincide with the condition of the body, depending on how the body was on the first occasion, and how it usually is when the animal spirits exist from the gland in this particular configuration."[205] Body does not act directly on the mind (or the will); it does act indirectly by,

> means of perceptions and ideas which these motions give rise to in the mind that it has the force to incline and stimulate the will to consent and to will that to which the movement which gave this thought to the understanding had disposed the body at the same time.[206]

The body acts indirectly on the mind via sense perceptions, "those which are stimulated primarily by the body without the consent of the will."[207] These sense perceptions are all sense perceptions that are confused, all dreams and day-dreams, and perceptions of the imaginations which are not initiated voluntarily.[208] More technically according to La Forge, these sense perceptions are, "perception[s] which is linked with the movement [simple motion which an object impresses on the nerves] when the impression is carried to the seat of the soul…".[209] The body via sense perceptions, carries a thought or an idea to the mind by the mediation of the pineal gland and stimulates the mind (the will) to have a thought (or idea). And if the thought is to walk, the mind executes its will by bringing about movement of limbs. La Forge points out that sensory perceptions are very confused but when compared to the sensory species they are most distinct. That is because when we discuss sensory perceptions, we compare them to other

[205] *Treatise* 134
[206] *Treatise* 151
[207] *Treatise* 154
[208] Sensations are types of knowledge which the close union of body and mind makes confused and obscure. To sense is, "simply to have the confused perception which is linked with every motion by which the nerve fibers are agitated, whatever the cause of the agitation. And thus the way in which the mind perceives, which is characteristics of all the senses in general, is this confusion which is found in perception and the fact it must be caused by the action of some external object" (*Treatise* 155).
[209] *Treatise* 154

perceptions (like perceptions we have from pure understanding). It is like comparing the idea of whiteness to the idea of extension. While in the cases of sensory species, we are comparing species – configuration of animal spirits – to other species.

These sense perceptions are a direct result of the motions of body communicated to the mind. Of course, there are perceptions of the mind that solely depend on the will. For example, the perceptions of pure understanding or perceptions that the "mind perceives [of] its own actions, for it is impossible to will something without being aware of the fact that one does so…"[210] These sense perceptions provide the mind with clear and distinct perceptions that provide the source for our judgments of what is truth. They represent to the mind what is harmful and beneficial for the body. These species are caused by the will or more accurately the will stimulates these species onto the gland.[211] Species caused by the will are different that those caused by external objects. The difference between the two species is that,

> the union between the ideas of purely sensible and imaginable things and the species which these things trace on the gland does not depend on our will but comes directly from nature. In contrast, the link between species stimulated on the gland and the thoughts or ideas of things which belong to the understanding results from our will, which has joined them with certain words or other corporeal signs or at least consented to the will of those who had previously joined them together, and it does not derive at all from nature.

Those ideas that are lawlike and constant given by nature as sensible things (against the will) do not depend on the will. But there are also species which are generated by the soul's volitional power and it is these species that will movement. Each species is joined with a thought (as the first law of union states: every motion of animal spirit will be accompanied by a certain idea which will cause the mind to have a thought), as such there are two thoughts that emerge (since

[210] *Treatise* 153 – 154
[211] *Treatise* 161

we have two sources – mind and body) . These thoughts (in general) are the motion of the internal part of the brain joined immediately with thoughts of the mind. The first thoughts are those of confused ideas of sensations, imagination, memory and the obscure feelings we have when we are hungry, thirsty, and the passions which are connected to various movements of the body. These thoughts of the mind are caused by the perception of understanding.[212] These thoughts "represent to us the action of the object either in the object itself and outside our body, or at least in the extremity of one of our limbs."[213] The second thoughts are those confused sensory knowledge united with the motions of body. These thoughts of the mind are caused by the inclination and determination of the will. These different inclinations of the will bring about different movements. We have those "constant, lawlike, and involuntary" ideas (thoughts) but we also have ideas (thoughts) that are produced by the mind's volitional power and as such are not constant, lawlike, or against its will.[214] Consequently, we have two particular (secondary) causes – mind and body – which both have a causal role to play in the interaction of mind and body. This causal activity is not one of efficient causation as a universal cause (like God) but as a particular cause and as Nadler tells us this is still a real cause "albeit an inferior or secondary variety" which has causal agency.

Although, La Forge advances a causal account of mind and body interaction in which both mind and body have causal power, many scholars maintain that the causal power of the body is due to it connection with a mind. For example, Nadler writes, "denying that bodies have moving force might commit you to occasionalism in the body-body case, it certainly does not

[212] These perceptions of understanding are different then the thoughts of pure understanding which, deals with clear and distinct perceptions and for judging the truth of things. These kinds of thoughts do not involve body.
[213] *Treatise* 131
[214] Nadler, 2010, p. 38

commit you to occasionalism in the body-mind case, particularly if you grant that the soul has an active power to produce its own ideas."[215] Nadler, here implies that the a non-occasionalistic account of interaction of mind and body is conceivable only because of the active power of the mind. While, cases of aversion (discussed below) will demonstrate the role bodies play in the causal story of mind and body interaction is much greater than being recognized.

3.3: How the Laws of Union Work: The Case of Aversion

The will can excite in itself the passion with which the motions (of the animal spirits) are linked. The will cannot directly have the passion but by using the faculty of imagination it can think about the object which can cause an emotion. This "spiritual idea" plus the "corporeal species" can determine the movement of the animal spirit and stimulate a passion. The will does not act directly on the mind to give it a new idea/thought or to bring about movement. Rather by means of the faculty of understanding an idea is applied by causing the mind to perceive something which then brings about movement. As such the body acts directly on the understanding and only indirectly on the will. Consequently, the cases of aversion demonstrate this unique interaction that takes place between mind and body. The flow of animal spirits being traced on the gland which in turn generate a passion in the mind which as a consequent produces a reaction in the body. Aversions according to La Forge are caused by the body, "I mean those where we can give no good reason why we love or hate certain things."[216] These aversions are driven by passions whose impressions have remained in the tissue of the memory. These impressions could have been while in the mother's womb or acquired after birth. What should

[215] Nadler, 2010, p. 115
[216] *Treatise* 199

be noted is that, "these impressions must be strong and must have been impressed at a time when the soul was not yet using recollection or, at least, when it had not yet perceived nor reflected on the first cause of its aversions and inclinations."[217] La Forge explicates this pathway of continued aversion:

> For if a thing which acted on our senses was very harmful to us, its species, which was traced on the gland, was followed by the motion of the spirits which stimulates hatred, so that when this same species is retraced on it later by any cause whatever, even if we do not remember having perceived it earlier, the same motion of spirits which followed it the first time continues to accompany it (and consequently to make us feel the same passion of hatred), because the spirit which form this second species find it easier to flow in the way which excites this passion than in any other.[218]

Of course, one should not be discouraged and think that once this pathway of hatred towards certain impression (and at times contra to the will wishes) has been established it cannot be changed. One can with effort and force change the association of an object, which elicits the impression, with harmful to not harmful. The only way for the mind to correct this association (motions of species accompanied with the passion of hatred) is to think of another object/thing "which is usually followed by other motions, and at the same time to make a resolution to stop the first ones by a contrary act of the will."[219] However, these natural aversions can last a lifetime since the effort required to resist the natural pathway of the flow of the species is great.

For example, King James of Great Britain, whose aversion was that when he saw a sword he displayed severe fright. He believed that the aversion manifested itself while in his mother's womb who was "frightened by the murder of one of her officers who was killed in her presence in her bedroom."[220] Although, according to La Forge, if this was true, he is not sure how a

[217] Ibid.
[218] Ibid.
[219] *Treatise* 201
[220] Ibid.

species of a harmful thing (the sword) was sketched in an infant's gland who could only perceive the actions of the officer through his mother's eyes. The likely explanation according to La Forge is that the object itself (the sword) did not generate the species but rather the surprise the mother felt at the sight of the murder is what was traced on the gland of the infant. Therefore,

> the principle effect of this surprise is to stop the gland at the place from which the species comes which caused the fright (as Mr Descartes well remarked when he spoke about wonder), and to carry the spirits in that direction so much that they are taken away from all other directions. This species is traced not only on the gland of the mother but also on that of the child…and even more forcefully than on that of the mother, because the child's gland is more tender and more capable of being disturbed by it.[221]

The surprise is what causes the noticeable change in the mother's animal spirit which can then cause a disturbance in the infant in her womb.[222] Thus, after birth it is possible that some traces of this species remains on the gland. And the sight of the sword in adulthood (although the animal spirits caused directly by the object of the sword are different) still contain enough resemblance that the same pathway created in the womb can be traced again and bring about the aversion (fright) of the sword.

Alternatively, some impressions are so strong that the object need not be present to initiate the pathway for the particular passion, "it is often enough to imagine it in order to excite the passion."[223] For example, La Forge tells us about a friend who has an aversion to garlic. This friend who consumed a sauce, which did not contain garlic, was told that the sauce has garlic. Upon hearing this the friend began to vomit everything he had eaten. Although, La Forge does think that this is one of the cases where the aversion can be remedied easily. Going back to his friend (who is deceived) and consumes a sauce that *does* have garlic and is not told shows no

[221] *Treatise* 202
[222] *Treaties* 201 – 202
[223] *Treatise* 202

physical reaction. Although those who have a "tender brain" may never get over the aversion because they cannot do the hard work required to associate the object/thing with different animal spirits.[224]

There are cases of aversion where the initiation of the aversion doesn't start while in the womb or when an injury occurred in the past. The aversion can occur even when a food we eat regularly is not bothersome, but it takes only one time to have that same food to leave a bad taste or upset our stomach to cause an aversion towards that same food. The aversion can remain, "even though we lose the memory of the particular cause which made us hate it."[225] In these scenarios the species of hatred is enough to generate the passion of aversion. The lack of reflection on the particular cause that would generate the species of hatred is enough to generate the aversion. For example, in cases where we hear the subject (which causes aversion) to be mentioned and triggers the pathways in the gland to be "reawaken" to bring about the physical reaction to the aversion. This can be observed in cases of medicine. When the medicine itself not present but the name generates aversion and the taste of bitterness in the mouth. This happens because,

> the object is so imprinted on our memory, because of our horror of it, that when the animal spirits are forced to go towards the place of this impression they find paths there which are so easy to open that they would not be any more so if they actually had the medicine in their mouth.[226]

Hence, the species sketched the second time on the gland by the effort of memory as successfully as the first time it was traced on the gland by the object itself, the mind does not need the object

[224] Ibid.
[225] Ibid.
[226] *Treatise* 203

(medicine) to be present but the mere belief that the object (medicine) is present is enough to generate the aversion and bitter taste in the mouth.

Additionally, what is presented to our senses need not be like its original object which caused the aversion in us the first time. A slight connection to the original aversion is enough. Because, "when many pores which are involved in tracing a particular species have often been opened together and are not usually opened separately, it is not easy subsequently for one of them to be opened without the other."[227] If one pore (as part of many pores) opens, this is enough to generate the opening of all the surrounding pores because, they follow the re-opening of the first pore. This is due to all pores (including the surrounding pores) being part of the original traces on the gland and part of the original passion. This level of vagueness is due to the fact that the first time these impressions and passions were generated were based on obscurity from infancy or lack any kind of reflection. Thus, the re-opening and the later passions being retraced on the gland follow this confusion generated with the original passion.

What the aversion cases show is not only that body and mind interact but more importantly the cause of the passion is the body. The body *is* affecting the mind when generating the passion of aversion. In La Forge's schema of causal interaction, the body via sense perceptions, communicates the corporeal species which is the motion (flow) of animal spirits plus the motion of the gland that are joined with the thoughts of the soul to the mind. In this scenario the body *is* impacting the mind. The bending of the gland and the configuration assumed at the same time by the flow of animal spirits can quickly change the association of love to one of hate and incite a physical reaction even when the object is not present .[228] La Forge has

[227] Ibid.
[228] *Treatise* 160

examined different cases of aversion but what they all have in common is that the origin of the passion is physical.

3.4 Conclusion: La Forge's Non-Occasionalist Model of Mind-Body Causal Interaction

We have seen that La Forge's causal model of interaction mind and body is one in which there are particular causes and it is their relation of mutual and reciprocal dependence that allows for the action of one to bring about the effect in the other. The body's movements stimulate thoughts in the mind and the mind's thoughts bring about movements in body.[229] The body acts on the mind giving rise to perceptions and ideas, which are the motions that an object impresses on the nerves, that brings about thoughts in the mind via the pineal gland. These perceptions and ideas incline and stimulate the will. In return the will has power to determine the direction of animal spirits in order to carry out its wishes and it does so also by means of ideas. This bi-directional causal interaction is how humans are created to operate and function. The body acts directly on the faculty of understanding to produce ideas, and indirectly on the will by means of ideas. Additionally, the soul does not directly move bodies; but by determining the movements of animal spirits via the pineal gland, it does bring about movement in the parts of body we wish to move. The will can determine the configuration of animal spirits to bring about the desired movement versus only having an indirect power over those configurations of animal spirits that are linked to our ideas that generate passions – these falls under the command of the soul. The soul has the authority to determine the direction with which animal spirits must go to implement the will's wishes, but it cannot increase or decrease the motion with which animal spirits exit the

[229] Ibid.

gland. Even though an indirect influence, nevertheless the will has the power in directing the mind to think of ideas that are linked with the configuration of animal spirits that bring about certain passions.[230]

Furthermore, La Forge tells us that, "He who willed to join them [mind and body] in this way had to resolve at the same time to give to mind the thoughts which we observe it acquiring on the occasion of motions of its body, and to determine the motions of its body in the way they should be in order to be subject to mind's will."[231] In such passages La Forge acknowledges the role God plays as creator of all things and as such He created mind and body in a such way that they are both united and interact. This does not make La Forge an occasionalist, the view that God is the only causal agent. Mind and body do act on each other because the mind has thoughts due to the motion of body and motion is determined in body to bring about movement.

Moreover, as discussed, the lack of similarity between mental and corporeal events rules out any transeunt efficient causation, but on Nadler's "occasional causation" account both the finite substances body and mind are in a position to be a primary cause of an effect. Going back to Nadler's suggested "occasional causation" model: A → B → *e*, A is the occasional cause of *e (effect)*; A occasions B to bring about or cause *e*. But *e* occurs only after A has occasioned B whose active power brings about the effect *e*. Thus, A is the cause of *e* (not as the traditional efficient cause) rather, A (as an occasional cause) occasions B, whose active power and activity brings about the effect *e*. In the case of *body-mind* interaction: A (Motions of body) elicits → B (Mind + Pineal Gland) as the primary cause produce the → *e* (effect - ideas). The action of external objects and the movements of parts of the body make an impression, which are motions of animal spirits, hit the nerve fibers. The impressions are carried to the pineal gland where the

[230] *Treatise* 151 – 152
[231] *Treatise* 150

soul must perceive the impressions and be aware of the idea. Thus, what is carried to the mind via pineal gland is: idea plus corporeal species (flow of animal spirits, the motion of the gland, and the thought of the soul which are immediately connected with them) which occasion the mind (as the primary and proximate cause) to stimulate an idea. Motions of the body (caused by an external object) are the occasional (secondary) cause but the mind as the total and primary cause produces the idea.

Similarly, in the case of *mind-body* interaction: A (Mind - by determination of the will to direct the animal spirits) → B (Body + Pineal Gland) → *e* (effect - movements in limbs). The determination of the will (volitional power of mind) directs the animal spirits to exist in a particular cavity of the body to bring about or cause movement of limbs. The determination of the will as the occasional (secondary) cause elicits the body as the total and primary cause to bring about the effect of movement in the limbs. In this scenario (according to "occasional causation") body is the active agent whose causal activity causes the movement in our limbs while the desire to move is caused by the will's wishes as the occasional cause. Both finite substances participate as causal agents. Thus, interaction of mind and body is not occasionalistic.

However, Nadler does not extend this same causal activity of bodies to body-body cases. The discussion to be picked up in Chapter Four is to evaluate why this causal agency given to bodies in the mind-body/body-mind cases cannot be applied to body-body cases. Accordingly, as covered in Chapter Two, body-body cases are not considered as a 'true' union since they do not fulfill all of the union criteria but they do meet the first part of the union criteria which states that two things must share some kind of relation, resemblance, or dependence. And bodies do share in a relationship of mutual proximity and dependence which facilitates their interaction according to the laws of motion. Based on the "occasional causation": A (body) → B (body) →

e (effect – motion). Body A linked to body B due to their shared relationship of mutual proximity and dependence elicits body B – as the primary and proximate cause – produces the effect – motion. The type of motion will be dependent on the laws of motion. For example, if body A is light then there will be more resistance in body B which will produce a slight motion. But if body A is heavy then there will be less resistance in body B and this in will produce a greater motion. This shared relationship and laws set and grounded in God allows even bodies to be primary and proximate causes although in the secondary sense

Chapter 4 – The Case Against Occasionalism in La Forge

4.1 Introduction: Arguments for La Forge's Occasionalism

In the contemporary scholarly literature a consensus has been reached that La Forge held a non-occasionalist account of mind-body interaction. Nadler, in particular, distinguishes between occasionalism and occasional causation such that the former entails the latter but that occasional causation does not entail occasionalism, thus exempting mind-body interaction from occasionalism. Nonetheless, when it comes to body-body causation, the consensus, including Nadler, is that such interactions are fully occasionalist (not merely occasional). For example, Nadler writes that, "I argue that La Forge's occasionalism is quite limited, and that he employs God's constant causal activity to explain only body-body relations."[232] Garber, groups La Forge in with other occasionalist thinkers who argued for occasionalism as a solution to Cartesian problems, such as Cordemoy and Geulinx.[233] According to Sukjae Lee, "in the case of La Forge, his credentials as an occasionalist about the causal efficacy of extended substances or bodies has never been in doubt."[234]

Against this consensus regarding body-body interaction, I argue in the next section that such occasionalist conclusions attributed to La Forge are not unjustified. What we find in the *Treatise* in regard to body-body interaction appears to be puzzling. Puzzling because we have passages such as,

[232] Nadler, 2010, p. 106
[233] Garber (1993)
[234] Lee, Sukjae, "Occasionalism", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/occasionalism/>.

> Let us conclude from all this, first, that it is impossible for a body to have from itself the power to move itself or to move another body…a body could never move another unless it is first moved itself and unless it has the force to move a whole circle of bodies…[235]

According to Nadler such passages are clear evidence that La Forge adopts the doctrine of occasionalism (employing God's constant causal activity) to explain body-body cases.[236] Hence, the goal of this chapter is to evaluate Nadler's position that La Forge is an occasionalist in regard to body-body cases and the role of divine conservation. In pursuit of this I will examine what La Forge has to say in chapter 16 of *Treatise on the Human Mind* (1666) the chapter which Nadler uses key paragraphs to make the case that La Forge is an occasionalist. I will demonstrate that even in body-body cases La Forge is not an occasionalist. For, if we mirror body-body relations to what we have already uncovered in the mind-body case (what I argue is the paradigmatic case of two finite substances) we see that in the body-body case one body shares in a relation of mutual proximity and dependence with another body, and because of this relation, bodies like minds have the power to determine motion. Attributing the power to determine motion from one body to another is different from claiming that bodies possess the motive force behind the creation of motion. This difference (determination of motion vs. creation of motion) in La Forge's causal model will facilitate a better understanding that particular causes, mind and body, have the same causal efficacy which is, to determine and direct motion.

4.1.1 Types of Occasionalism

The occasionalist doctrine of causation states that no created things have causal agency and that God is the primary and total source of all effects found in nature. Bodies and minds, as

[235] *Treatise* 147
[236] Nadler, 2010, p. 106

finite beings, equally lack causal agency. For example, the mind does not cause the body to take any action and vice versa, bodies have no causal powers over minds to bring about thoughts. God is the one and only true cause bringing about all effects. For example, "when a needle pricks the skin, the physical event is merely an occasion for God to cause the relevant mental state (pain); a volition in the soul to raise an arm or to think of something is only an occasion for God to cause the arm to rise or the idea to be present to the mind…".[237] There are a variety of occasionalism even though all subscribe to the core doctrine that God is the only true cause. There is Islamic occasionalism which develops out of the Ash'arite school of Kalam (Islamic doctrine of theology). [238] Al-Ghazali (1055 – 1111) who argues for occasionalism in his work, *The Incoherence of the Philosophers* (*Tahafut al-falasifa*), was apprehensive to make the claim (as Ibn – Sina (Avicenna: 970 – 1037) does) that the causal relations between a cause and the effect is such that the cause necessarily brings about the effect.[239] In contemporary terms, this version of occasionalism is known as the *no necessary connection* position – i.e., that there is not a necessary connection between causes and their effects on the particular finite level. If one ascribes to this doctrine, then Al-Ghazali feared there would be no room for miracles since effects must necessarily follow from its cause. As such Al-Ghazali endows all causal

[237] Nadler, 1992, p. viii

[238] Unless cited differently discussions on the different types of occasionalism come from:
Lee, Sukjae, "Occasionalism", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/occasionalism/>.

[239] From the Seventeenth Discussion (On Causality and Miracles), Al-Ghazali writes, "The connection between what is habitually believed to be a cause and what is habitually believed to be an effect is not necessary, according to us. But [with] any two things, where "this" is not "that" and "that" is not "this," and where neither the affirmation of the one entails the affirmation of the other nor the negation of the one entails the negation of the other, it is not a necessity of the existence of the one that the other should not exist – for example, the quenching of thirst and drinking, satiety and eating, burning and contact with fire, light and the appearance of the sun, death and decapitation, healing and the drinking of medicine, the purging of the bowels and using of a purgative, and so on to [include] all [that is] observable among connected things in medicine, astronomy, arts, and crafts. Their connection is due to the prior decree of God, who creates them side by side, not to its being necessary itself, incapable separation. On the contrary, it is within [divine] power to create satiety without eating, to create death without decapitation, to continue life after decapitation, and so on to all connected things. The philosophers denied the possibility of [this] and claimed it to be impossible" (*TF* 166).

necessitating powers to God and denies any causal powers to finite substances. As such divine omnipotence has no limitation except those state of affairs that are logically inconsistent.

There is the Medieval Christian version of occasionalism that appears in Nicholas of Autrecourt (1295/1298 - 1369). Familiar with Al-Ghazali's work he also criticized the view that there must be a "necessary connection" between cause and effect. However, his worry wasn't so much that we must allow room for miracles but rather that we lack certitude in regard to the causal connection between the cause and its effects. This implies that he was a skeptic rather than an occasionalist *per se* even though he employed Al-Ghazali's occasionalistic ideas to make his arguments. There is Cartesian occasionalism, often ascribed to Descartes or his successors, because of Descartes's physics which holds that: 1) matter is passive and 2) motion is created and maintained by God. As Sukjae Lee asserts, "in the case of La Forge, his credentials as an occasionalist about the causal efficacy of extended substances or bodies has never been in doubt."[240] According to both Nadler and Lee limiting La Forge's occasionalism to body-body interaction is an appropriate assessment since the mind in and of itself can be the cause of ideas – a causal activity that is not extended to bodies. Thus, they ascribe a partial occasionalism to La Forge, governing body-body interaction, but not mind-body or mind-mind interaction. Of course, there are those that were both Cartesian and an all-encompassing occasionalists, such as Geraud de Cordemoy (1626 – 1684) and Malebranche (1638 – 1715) who denied all causal efficacy to both substances – mind and body. Nadler writes that,

> the occasionalism of Malebranche, Cordemoy, Clauberg, Geulincx, and La Forge all differ in scope and in argumentation. Malebranche, for example, is a thorough-going an occasionalist as one could hope for, as is Cordemoy. Clauberg's alleged occasionalism, on the other hand, appears to be limited to mind-body relations. And then there is the case of Arnauld, who employs occasionalism to explain only one facet of mind-body relations, namely, how bodily motions occasion God to produce sensations in the mind. It may be that a limited employment of occasionalism, such as La Forge's, is the rule rather

[240] Ibid.

> than the exception among Cartesians. In any case, we should be very careful about any general claims we may be tempted to make about "the occasionalists."[241]

It seems then, one need not ascribe to a strict and universal version of occasionalism. A partial occasionalism of body-body interaction may allow for causal activity between finite substances as it relates to mind-body interaction wherein mind is the causal agent and not God. This partial occasionalism is what Nadler ascribes to La Forge. This partial occasionalism draws upon what Nadler refers to as the *passive nature argument*. Bodies (Cartesian extended substances) are by nature passive and lack the power to initiate or transfer movement to other bodies. La Forge does not employ the *no knowledge* argument that extends to the case of mind-body interaction as seen in Geulincx and Malebranche. According to Geulincx, "you are not the cause of that which you do not know how to bring about."[242] In this version of occasionalism minds also lack causal power. Since, as a true cause you need to have knowledge of what the intended effects would be and mind's lack this kind of knowledge.[243]

4.1.2 Nadler's account of Body-Body Cases and Why it is Occasionalistic

Nadler argues that La Forge's occasionalism is limited to body-body cases, but applicable to body-body cases because it is in these cases that God's constant causal activity is required. What's important to recognize is that Nadler's definition of occasionalism applies to particular events. He thinks it's an error to assume that occasionalism is applied only to general laws and

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[241] Nadler, 2010, p. 121 – 122

[242] Lee, Sukjae, "Occasionalism", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/occasionalism/>.

[243] According to Malebranche, "But I deny that my will is the true cause of my arm's movement, of my mind's ideas, and of other things accompanying my volitions, for I see no relation whatever between such different things. I even see clearly that there can be no relation between the volition I have to move my arm and the agitation of the animal spirits, i.e., of certain tiny bodies whose motion and figure I do not know and which choose certain nerve canals from a million others I do not know in order to cause in me the motion I desire through an infinity of movements I do not desire" (OCM III 226/*Search* 669).

not to particular events. He states, "God is actually and immediately moving individual bodies around and producing particular mental events, although God does always act in accordance with certain general laws and never arbitrarily. This difference is important for my argument."[244] In this account of occasionalism Nadler acknowledges that mind and body do causally interact but not in the standard efficient causation kind of way – where the cause brings about the effect. But in the case of body-body interaction Nadler claims that La Forge's occasionalism is clear and straightforward. Below is an analysis Nadler gives on La Forge's chapter 16: *How the Mind and Body Act on Each Other, and How One Body Moves Another* and ultimately reaches the conclusion that the body-body case is a clear-cut case of occasionalism. Below I will also review and present La Forge's points for comparison. But, for now, according to Nadler "La Forge offers four main arguments to the effect that bodies have no motive force, no power to cause or sustain motion either in themselves or in other bodies."[245]

> 1) "our clear and distinct concept of body, which includes only extension and its properties, represents body as a purely passive and does not contain any such active force."
>
> 2) "the motion of a body is simply a mode of it, and (on the Cartesian ontology) modes cannot pass from the substance to which they belong to some other substance. Thus, real transitive causation – whereby one body would communicate or transfer its motion to another body – is ruled out."
>
> 3) "motive force is not inherent in bodies, and hence that 'no body has the power to move itself'"
>
> 4) God is required to "sustain it [the world] in existence from moment to moment by a kind of continuous production."[246]

[244] Nadler, 2010, p. 107
[245] Nadler, 2010, p. 110
[246] Ibid. – (for points 1- 4)

Nadler concludes that the force required to move bodies can only be done by the will of God and body-body "relations" are occasionalistic. Nadler draws such conclusions from what La Forge has to say in Chapter 16 in regard to the kind of power a body has. According to La Forge,

> …I also claim that there is no creature, spiritual or corporeal, which can cause change in it or in any of its parts, in the second moment of their creation, if the Creator does not do so himself. Since it was He who produced this part of matter in place A, for example, not only must he continue to produce it if he wished it to continue to exist but also, since he cannot create it everywhere or nowhere, he must put it in place B himself if he wishes it to be there.[247]

According to Nadler the above quote is a strong argument to make the case that bodies have no causal power to move themselves or other bodies. God is the transeunt efficient cause of motion and rest in bodies. Although the above quote from La Forge appears as evidence condemning him to an occasionalistic account of body-body interaction below I will demonstrate that the above quote merely describes the role of God in La Forge's metaphysical system as the creator of motion. While, in regard to mind-body interaction or as Nadler puts it "relations" he has a different viewpoint. According to Nadler,

> Now to say that the external material body – or, more precisely, the motions it communicates to the brain – is the "occasional" cause of the idea does not commit La Forge to an occasionalism here.[248] First, note that these motions do not serve *God* as an occasion to cause an idea; rather, they serve the mind itself, which is endowed with an active causal power. Second, one can call the bodily motions an "occasional cause" and still insist that they are not without a kind of causal efficacy…For La Forge, as well as for others, an occasional, remote, or accidental cause is still a cause: an inferior type of cause when compared to an efficient cause, to be sure, but a real cause nonetheless…The bodily motions do really occasion or elicit the mind's own efficient causality. It is in this sense that La Forge thinks he can still speak of the "power" the body has to excite thought.[249]

[247] *Treatise* 147
[248] Nadler is referring to "occasional causation" here which I covered in chapter 3.
[249] Nadler, 2010, p. 113

On the face of it, it appears that we are discussing two different bodies. The one body in the body-body case and a second body in the mind-body case. The body in the body-body case has no power while in the mind-body case the body does have some kind of power even if it is inferior to an efficient cause. The body in the mind-body case has causal efficacy in the remote and accidental sense as Descartes writes in *Comments on a Certain Broadsheet*,

> …if we consider that something can be said to derive its being from something else for two different reasons: either the other thing is its proximate and primary cause, without which it cannot exist, or it is a remote and merely accidental cause, which gives the primary cause occasion to produce its effect at one moment rather than another.[250]

Nadler picks up this point from Descartes and states that bodies, as remote and accidental cause (while secondary), cause thoughts in minds. Furthermore, Nadler tells us that the body in the mind-body case does not actually move a mind. The body is not acting on the mind to bring about movement, "the presence or absence of moving force in the body is thus irrelevant in this context. While denying that bodies have moving force might commit you to occasionalism in the body-body case, it certainly does not commit you to occasionalism in the body-mind case…"[251] Then, both in the body-body case and mind-body case we do have a unified concept of body. In both scenarios body does not have a motive force and it is not an efficient cause but in the context of body-body cases *we do require* that the body have motive force or act as an efficient cause while in the mind-body case we are giving the role of efficient causation to the mind and do not have the same requirement for the body. If Nadler allows that body has not changed in either case, meaning body is always passive and does not possess motive powers, why do the requirements change for how body operates in the mind-body case versus the body-body case? Furthermore, body being united to mind seems to give it (body) a special role or a special

[250] CSM I 305
[251] Nadler, 2010, p. 115

influence that are not given to body in the body-body case. I argue this *specialness* that is attributed to body in the mind-body case is something that the secondary literature has attributed to body in their interpretation of Cartesian philosophy in trying to keep dualism and yet have an explanation for causal interaction. If we go back to Chapter Two and look at what La Forge presents to us in regard to relations and the union criteria, we can see that the operation and the power of body in both body-body case and mind-body case is the same. Thus, if the role of the body in mind-body interaction is not occasionalistic, why must we conclude that it is in the body-body cases? It is these very issues that lead La Forge to start Chapter 16 of the *Treatise* with the statement that,

> I think most people would not believe me if I said that it is no more difficult to conceive how the human mind, without being extended, can move the body and how the body without being a spiritual thing can act on the mind, than to conceive how a body has the power to move itself and to communicate its motion to another body. Yet there is nothing more true, and that is what I propose to show in this chapter. [252]

Grappling with the problems of Cartesian philosophy, many assume that an account of causal interaction between two distinct substances (mind and body) would be a more difficult task than the case of body-body interaction because body-body interaction is an example of same substance interaction. However, La Forge tells us that cases of body-body interaction are as difficult because you have to account for how a body has the power to move another body and bring about self-movement. Furthermore, La Forge states that "there is nothing more true" than that there is interaction between mind-body and body-body

[252] *Treatise* 143

4.2 What La Forge Has to Say About Bodies

It is significant that La Forge discusses his account of mind-body union (and the foundation for interaction) in chapters 13 - 15, prior to taking up the question of body-body interaction. Furthermore, by the time La Forge picks up the discussion on body-body interaction, he has already provided a well-established relational system of how a mind and body, body and body, mind and mind are linked (discussed in Chapter Two). Choosing such an order of discussion (first giving an account of shared relation, followed by union of mind and body and then tackling cases of body-body) suggests that mind and body cases are not the exception but rather the norm and as such we can use what La Forge offers there to guide us in the body-body cases.

This is why, La Forge tell us that,

> The cause of motion of bodies is not therefore something which is obvious as one might think, and that is why I said at the beginning that it was no more difficult to conceive how the mind moves the body than how one body moves another because, in fact, one must have recourse to the same universal cause in both cases.[253]

Thus, according to La Forge, conceiving how the mind and body interact and how the body and body interact is equal in difficulty as the same universal cause must be applied to both.[254] To better understand the role of each cause, general (universal) and particular (secondary), La Forge tells us that there is a difference between "the cause of a movement and the cause which determines it, because one is often different from the other just as movement is from the force which makes things move."[255] We clearly see the effects in the world when a body moves but

[253] Ibid.
[254] Interestingly, as we saw in Descartes's correspondence with Elizabeth, he wrote that it is more difficult to conceive of the union of mind-body than the mind alone or body alone, and for that reason leaves aside the issue of union and interaction (for another time) so that he could make clear the real distinction between mind and body. This is a new although related point that La Forge is making regarding conceiving the interaction of mind and body.
[255] *Treatise* 145

we never perceive the force which allows a heavy object to move downwards or how one body has the power to move another body.

La Forge tells us that the word *motion* can be used in two different ways. There is motion that is a mode of body and is not distinct from the body, does not pass from one body to another and it does not belong to the spiritual substance. The word motion in this sense is just "considered in the body which is moved, is only the 'transfer of a body from the vicinity of those which are in immediate contact with it and which are regarded as being at rest, to the vicinity of other bodies'".[256] But the second way in which the word motion is considered is a force that has the capacity to "transport a body from one vicinity to another and which applies it successively to different parts of the bodies which it leaves behind."[257] This *motion* is something distinct from the body and the application of the word is also distinct. This usage of the word motion is not a mode found in corporeal substance. From this La Forge reaches the conclusion that,

> Now if the force which moves is distinct from the thing which is moved and if bodies alone can be moved, it follows clearly that no body can have the power of self-movement in itself. For if that were the case this force would not be distinct from the body, because no attribute or property is distinct from the thing to which it belongs.[258]

Hence, if a body does not have the power to move itself then it will also lack the power needed to move another body. If a body is in motion it is because something distinct (from itself) pushed it into motion. To drive this point home, that the force that brings about movement is not the body itself, La Forge gives two instances which lead to the conclusion that God is the one true cause of motion. In the first illustration where God has removed all motion, matter (always created at rest) is not active and as such cannot move itself or bring about any movement. Since,

[256] *Treatise* 145
[257] Ibid.
[258] Ibid.

"it was He who produced this part of matter in place A, for example, not only must he continue to produce it if he wishes it to continue to exist but also…he must put it in place B himself if he wishes it to be there."[259] It is God who brings matter into existence, it is God who continues to ensure its continuous existence, and it is God who moves matter from one place to another.

In the second illustration God has infused motive force in bodies;

> Let us even consider that if God gave this particular body A all the motive force which he uses at present to move the whole of nature, it would not be enough even all that to change its location, both because it would not be able to overcome the resistance of the rest of matter which we assume is at rest, and because in order to make body A capable of leaving its place to enter that of another body, the other body which it replaces would also have to move at the same moment that body A begins to move, since it is impossible for the first body to take the place of a second unless, at the same time as it tries to do so, the second body leaves that place and enters that of a third body and the third enters that of a forth, and so on.[260]

Only God could bring about such an orchestrated movement of bodies. Matter alone cannot move itself. It is God who can bring about the displacement of one body for another body. Thus, even in a scenario that God has given bodies motive force it is still God's causal power that brings about movement from place A to place B. Matter cannot bring about self-movement. This leads to the conclusion that, "it is impossible for a body to have from itself the power to move itself or to move another body."[261]

Now, from these two instances it is easy to see why an occasionalist reading is attributed to La Forge, but it is important to recognize La Forge's aim in giving these two illustrations. His aim is to establish that, God "is the first, universal and total cause of motion".[262] La Forge agrees with the occasionalistic stance that active/motive force lies with the will of God. However, La Forge differentiates between universal and particular causes which mirrors itself onto the

[259] *Treatise* 146 - 147
[260] *Treatise* 147
[261] Ibid.
[262] Ibid.

description of what is the universal cause of motion and what is the particular cause that determines the specific direction and speed of the motion. Bodies do not have the power to bring about self-movement but, bodies can determine their own motion.[263] This point is also made by Descartes in *Principles of Philosophy* when he states that, "there is a difference between motion considered in itself <the motion of a thing> and its determination of the direction can be altered, while the motion remains constant".[264] Meaning the total quantity of motion in the universe remains constant because God as its author maintains it but the direction of bodies in motion can be altered and this alteration of direction does not lie with God.

God is the creator and sustainer of motion because bodies are not the source of motion but rather have the capability to determine specific motions. La Forge tells us this very point when he states that,

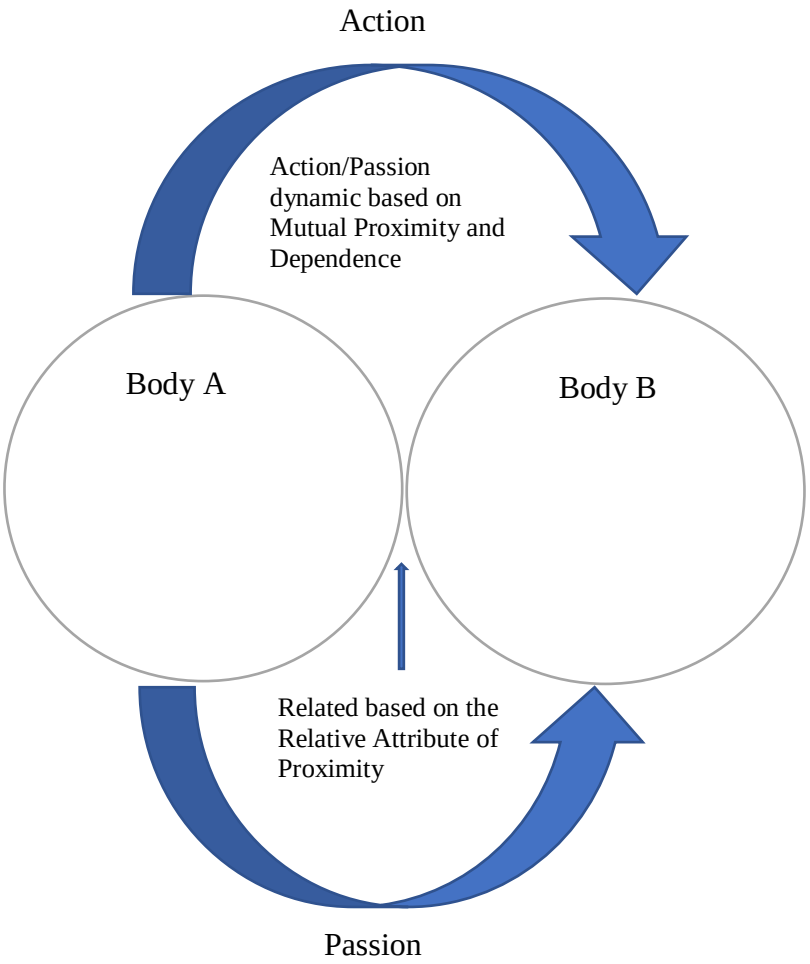
> Although God is thus the universal cause of all the motion which occurs in the world, I also recognize *bodies* and *minds* as the particular cause of these same motions, not really in producing any 'impressed' quality in the way the Schools explain it, but in determining and forcing the first cause to apply his force and motive power to the bodies to which he would not otherwise have applied it, according to the way He decided to govern himself in relation to bodies and minds; that is, bodies, according to the laws of motion which are so well explained in Book Two of Mr Descartes's *Principles*;[265] and for minds, according to the scope of the power which He chose to give to their wills. The power of bodies and minds to move consists in that alone. Therefore, it is no more difficult to understand how a mind can act on a body and move it, than to conceive how one body pushes another.[266]

[263] In book of two of *Principles of Philosophy* rule 37 we get the first law of nature which states, "each and every thing, in so far as it can, always continues in the same state; and thus what is once in motion always continues to move. Rule 39 we get the second law of nature which states, "all motion is in itself rectilinear; and hence any body moving in a circle always tends to move away from the center of the circle which it describes". Finally in rule 40 we get the third law of nature which states, "if a body collides with another body that is stronger than itself, it loses none of its motion; but if it collides with a weaker body, it loses a quantity of motion equal to that which it imparts to the other body".
[264] CSM I 242 – 243
[265] Ibid.
[266] *Treatise* 148 (emphasis add by me)

Bodies and minds (as discussed in Chapter Three) as particular/secondary causes can determine motion – the motion that is already created by God. Bodies by determining and forcing the first cause (God) to apply his force and power to push other bodies and the will's volitional power to determine the motion of the animal spirits to bring about movement in the limbs. This determination is done according to the laws of motion and in the case of mind according to the laws of union. In this, even limiting sense, bodies have power and causal efficacy.

The union of mind and body provides the basis for the mutual dependence of the operations of mind and body on one another. By analogy, we can see how one body is linked to another body (as discussed in Chapter Two) by mutual proximity and dependence.

Figure 2



Recall that no union of body-body is required as they share the same nature, so a body-body relation is not considered a true union according to La Forge. In body-body cases the "union" and their ultimate interaction is founded in the sameness of substance, corporeal substance, and not based on two things that are distinct. Thus, body-body cases do not meet the first part of the union criterion – that the union is between two distinct things. But body-body cases *do* meet the second part of the union criterion which states that two things must share a relation, resemblance, or dependence which allows two things to be considered as one. Body-body interaction is between two things (although not distinct) that share in a relation of mutual local proximity and dependence. The interaction of a body with another body is a simpler case than a mind with a body or a body with a mind, because it does not require a true union of distinct things, but it is not different in the requirement that there be a relation of proximity and mutual dependence. Nor is the case of body-body interaction different in kind from the case of mind-body interaction, as La Forge explains in the quotation above. In other words, God is the universal cause of motion whereas *bodies* and *minds* are the particular causes and determinants of particular motions, i.e., "in determining and forcing the first cause to apply his force and motive power to the bodies *to which he would not otherwise have applied it*, … that is, bodies, according to the laws of motion … and for minds, according to the scope of the power which He chose to give to their wills." [my emphasis].

For this reason, body-body and mind-body cases should be understood according to the same general model of causation. God is the universal cause of all motion, and minds and bodies are the particular causes, i.e., determinants of particular motions. Moreover, it is useful to consider the mind-body case as paradigmatic in understanding La Forge, rather than the body-body case, *pace* Nadler et al. In doing so, the claim that La Forge was an occasionalist with

respect to body-body interaction loses its plausibility. The body does not have the power itself to move itself or to move another body but, "I [La Forge] reply that if they were already in motion, this body would not move them but would merely *determine* their motion."[267] Bodies and minds were never to be viewed as the universal and total cause of motion in La Forge's metaphysical schema – it is God, but holding that God is the universal cause does not entail occasionalism. Nadler acknowledges that La Forge seems not to embrace an occasionalist account of mind-body interaction, but concludes otherwise for body-body interaction. Yet, La Forge seems to hold the same position on the power of the soul with respect to the body as he does for the body with respect to the body:

> soul does not have the power either to increase or decrease the motion of spirits which exist from the gland; it has the power only to *determine* them, that is, to turn them in the direction in which they must go in order to execute its will.[268]

Similar to bodies, minds are not the total and universal cause. Minds, like bodies do not increase or decrease the total quantity of motion but have the power to determine its direction. Mind and body are on the same footing as far as having causal efficacy – both determine the direction of motion. Thus, body in the mind-body case does not have a special standing because it is united to a mind as Nadler holds. La Forge (and Descartes) never require bodies to have motive force regardless of discussing body-body or mind-body cases. Although minds can imagine new ideas like a winged horse and in this sense Nadler views minds as different than bodies – this ability of self-generating ideas. However, the explanatory discussion on the production of ideas is a descriptive account of the operation of the mind and specifically on the faculty of imagination (a consequence of the union between mind and body) and not a causal account. Causality, for La

[267] *Treatise* 147
[268] *Treatise* 151 (emphasis added by me)

Forge, is all about determining the direction of motions in relation to bodies and minds. The faculty of imagination and the faculty of understanding are the ways in which the mind operates but that tells us nothing about the causal efficacy of the mind. The scope of the mind's power to direct the body, including or perhaps especially its animal spirits, to general ideas and movements in the body, depend on the local and mutual dependences of the mind-body and body-body relations.

La Forge establishes a key distinction between universal and particular causes, which then grounds his subsequent attribution of secondary causal power to wills--to move bodies, and to bodies--to direct the movements of other bodies. La Forge's argument that mind and body both have the power to determine motion is not an argument that Nadler takes into consideration. Accordingly, Nadler writes,

> Bodies are moved both by inanimate bodies and by animate bodies (e.g., a baseball thrown by a pitcher). When bodies are moved by inanimate bodies, the story is a straightforward occasionalist one. When an animate body (in voluntary motion) moves another body, however, the bodily motions that occasion God to move the second body are themselves caused by the mind. Thus, even though the second body's causal relationship to the first body is a strictly occasionalist one, a human mind (or, more precisely, a volition) plays a role in the overall occasionalistic picture: had the mind not moved its own body in a certain way, the "first cause" (God) would not have been "determined and obliged" to "apply his force" and move the second body in a certain way. It is in this sense that one must make room for *les esprits* in addition to *les corps* as "particular causes" – occasioning causes – of the motions of bodies moved by God.[269]

For Nadler, one inanimate body can move another inanimate body and in these cases the causal account is strictly occasionalistic. In addition, one animate body (a body united to a mind), can move another inanimate body and this causal account of interaction is also occasionalistic. Even though, the volitional powers of the mind have a role to play, in Nadler's view the overall account of the animate body moving another inanimate body remains occasionalistic. What

[269] Nadler, 2010, p. 119

Nadler describes in the above passage is that God as the first cause applies his force to get the second body (the inanimate body) to move. As Nadler sees it, is that A (animate body – united to a mind uses its volitional power) to move in a certain way that occasions → B (God) as the first cause to "determine and obliged" to "apply his force" → *e* (effect - to bring about the movement in the second body) movement in the inanimate body. Thus, the causal relationship between the animate and inanimate body is one of occasionalism. However, in the above description of occasional causation, it seems that Nadler describes an account in which the finite substances, animate body, elicits (occasions) God, the infinite substance. In this scenario, the animate body has causal efficacy to cause God to apply its force and yet the same body only has an occasionalistic relationship with the second body. It is important to point out that Nadler himself says that in the occasional causation model, "neither, then, does occasional causation require God to be the being B…" and the relationship of A to *e* is one based on a "nomological" relationship – a law like relationship. [270] If we were to keep to this nomological relationship between A (the first body) and e (the movement of second body) then the first body, according to the three laws of motion, could determine motion and bring about movement in the second body. Yet, in the above depiction, Nadler asserts that the relationship between A and *e* is based on an occasionalistic causal relationship. It is clear that Nadler does not take into account the power that bodies have – the power to determine and direct motion.

If we adhere to what La Forge has told us, that body has the power to determine motion while obeying the three laws of motion, and apply this to Nadler's occasional causation model then: when body A collides with body B we can say that body A and B are linked due to their relationship of mutual proximity and dependence and adhere to the three laws of motion which

[270] Nadler, 2010, p. 35

facilitate the determination of motion. So that when body A, due to its greater weight (later understood as mass) over body B, collides with body B, then body B is moved. A (motions in the body) as the occasional cause (linked to body B due to the relationship of mutual proximity and dependence it has to body B) elicits body B → B (body) according to the laws of motion: "if its [body A] power of continuing is greater than the resistance of the other body [B], it carries that body along with it"[271] as the proximate cause brings about the effect → *e* (effect) movement of body B since its resistance is less than the power of body A. La Forge's account of mutual proximity provides us with the missing connection that body A and body B share, and this does not require one to invoke God in the causal account. This in turn facilitates a non-occasionalistic account of body-body interaction.

4.3 Conservationism and Continuous Creation

Nevertheless, even when an account is established that describes universal and particular causes there is still the claim that conservationism reduces to continuous creation which is another frame for understanding occasionalism. The view that God creates and maintains the existence of motion over time is conservationism. However, it has been argued in literature that conservationism is continuous creation.[272] The argument is that the difference between creation and conservation is one based on conceptual distinction. The argument is that there is no difference between God creating and God conserving. This is merely two words describing the same act of God. We use the word creation to capture the first time God created something, but

[271] CSM I 242
[272] Lee, Sukjae, "Occasionalism", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/occasionalism/>.

conservation is the word we use to capture the subsequent creations of God. For example, Descartes in *Principles of Philosophy* writes,

> It will be impossible for anything to obscure the clarity of this proof, if we attend to the nature of time or of the duration of things. For the nature of time is such that its parts are not mutually dependent, and never coexist. Thus, from the fact that we now exist, it does not follow that we shall exist a moment from now, unless there is some cause – the same cause which originally produced us – which continually reproduces us, as it were, that is to say, which keeps us in existence. For we easily understand that there is no power in us enabling us to keep ourselves in existence. We also understand that he who has so great a power that he can keep us in existence, …[273]

The above passage from Descartes has been used to argue that created things are not able to contribute causally to their existence. It is God, which creates and conserves His created creatures. Creation and conservation would be a distinct concept if created things were able to cause their own existence. Going back to the passage used by Nadler from La Forge's Chapter 16 we find a similar position as Descartes,

> …I also claim that there is no creature, spiritual or corporeal, which can cause change in it or in any of its parts, in the second moment of their creation, if the Creator does not do so himself. Since it was He who produced this part of matter in place A, for example, not only must he continue to produce it if he wished it to continue to exist but also, since he cannot create it everywhere or nowhere, he must put it in place B himself if he wishes it to be there.[274]

However, what should be noted is that, in both of the above passages the act of creation from *ex nihilo* is being demonstrated and not continuous creation. The notion that God directly moves physical bodies is the foundation for a continuous creation account. Secondary literature uses the above passages to make the claim that God *is* the only causal agent and even if God preserves, He alone creates and brings about change and as such, conservationism (preservation of the world) is reduced to an account of continuous creation of the world. However, both

[273] CSM I 200
[274] *Treatise* 147

Descartes and La Forge, with the passages above are showcasing that God is the universal cause but a God who has minimal involvement once His creatures are created. All motion is created and conserved by God but that does not commit La Forge to being an occasionalist. This is not an occasionalist doctrine but rather a conservationism principle. According to La Forge,

> …as he (God) had to use his omnipotent word to draw whole of nature out of nothingness, it is also by means of his word that he drew this same nature out of chaos by producing motion in it. And just as nature would revert to nothingness if he ceased drawing it out from it at every moment in which he conserves it, it would likewise return to its pristine confusion if He did not maintain the motion which he produced.[275]

God continues to conserve what he has created this includes matter, motion, etc. God as both the force and as the universal, general, and total cause creates motion and conserves matter but He also imparts power to His created creatures to determine motion (different than creating new motion). The theory that God's contribution is minimal once He has created things is conservationism. According to Sukjae Lee, "while God conserves substances with their power in existence, when creatures are causally active in bringing about their natural effect, God's contribution is remote or indirect."[276] God creates and conserves the essential nature or essence of created entities, but it is the individual entities that have their own causal activity. However, in secondary literature the tendencies is to make the argument that "conservation is but continuous creation".[277] According to Lee, a version of the continuous creation argument has existed since the 9th century. Accordingly, al-Ash'ari (873 – 935) founder of the Ash'arite school based on the Greek theory of atomism, claims that movement of body does not consist of a continuous process rather, the movement is based on small leaps. Body can move from point 1, to point 3, skipping point 2 because movement is based on a sequence of leaped instances. At

[275] *Treatise* 148
[276] Lee, Sukjae, "Occasionalism", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/occasionalism/>.
[277] Ibid.

each moment the body is created anew with its modes and properties. This version of continuous creation holds the view that,

> God brings about the accidents that inhere in the substances by continuously recreating these modes. If God sustains the existence of the atoms themselves, while continuously recreating all of their modes, then the occasionalist conclusion that God is the only genuine cause does follow from this interpretation of divine conservative activity.[278]

In La Forge the argument for continuous creation is found when he writes,

> Let us assume then, for example, during the first moment of its creation, that it was produced at rest. If that were the case, since God is immutable and acts in a way which he never changes, how could we believe that this formless mass – which even lacks the power to continue to exist on its own for a single moment – could in its entirety move itself by its own power a moment later or could force one of its parts to change place? But not only can it not change its condition by its own power; I also claim that there is no creature, spiritual or corporeal, which can cause change in it or in any of its parts, in the second moment of their creation, if the Creator does not do so himself. Since it was He who produced this part of matter in place A, for example, not only must he continue to produce it if he wishes it to continue to exist but also, since he cannot create everywhere or nowhere, he must put it in place B himself if he wishes it to be there. For if he put it anywhere else there is no force capable of removing it from that location. [279]

According to Nadler's interpretation, a body positioned at a place and time, is there because God created the body and placed it there and it continues to be there because God conserves it. But, "the relative place of a body just is a mode of it."[280] God, then, is responsible for both the continued existence of body and its modes. Accordingly, "it is just *because* God sustains bodies in specific and particular ways from moment to moment through a kind of continuous creation that bodies have the modal properties they do. God's creative/conserving power reaches through a substance, so to speak, to its modes." [281]

The aim of the above passage from La Forge is to articulate what is both required and lacked in a corporeal (inanimate) body as it relates to the creation of motion. The passage leads

[278] Ibid.
[279] *Treatise* 146 – 147
[280] Nadler, 2010, p. 128
[281] Ibid.

to the conclusion that God is the first, universal and total cause of motion. God also conserves this motion due to his omnipotence knowing that if He does not the world would revert to a state of confusion. Since, corporeal body (as well as the mind) are created by Him, one would assume that when He creates his creatures, He creates them complete including their modes and properties. Once created as part of His creations he continues to also conserve their existence as he does with motion. He need not "reach through a substance" as it were in each moment to create them anew. Nonetheless, La Forge also tells us that, "although God is thus the universal cause of all the motion which occur in the world, I also recognize bodies and mind as the particular causes of these same motions." Furthermore, La Forge states that the,

> force which moves can be considered either as belonging to God, who conserves in the parts of matter as much transfer or motion as he put there in creating it ('namely, by continuing to move them with the same force'), or as belonging to a created substance, for example, our soul and whatever else there may be to which God gave the power of moving bodies ('not by producing a new motion in the universe, but in merely determining the first cause to exercise its force on a given subject').[282]

Finite substances also have force, not in the same sense as God as the universal and total cause but, as particular secondary causes that have autonomy and can determine motion. If God, based on his conservationism, just continually reaches into substances and changes their modes (state of rest or in a state of motion), it is not clear why finite substances have causal efficacy (on the weaker sense). Nadler also acknowledge this point by stating that, "the problem that will emerge concerns the nature of the soul as an active substance. That is, I do not see how, after adopting the particular doctrine of divine conservation that La Forge proposes, one can avoid the conclusion that the soul itself is inactive, and for precisely the same reasons, given his arguments, that the body is inactive."[283] But that is a misunderstanding with Nadler's

[282] *Treatise* 150
[283] Nadler, 2010, p. 130

interpretation of La Forge. La Forge is clear mind and body are in the same standing, they both have the power to determine motion – that is all. God is the first, universal and total cause of motion. Mind and body are particular (secondary) causes only. The best interpretation of La Forge is that God creates the world, but he also conserves it. This model of conservationism does not reduce to occasionalism because God is not creating modes and properties of substances anew in each moment. God does communicate with His created creatures, mind and body but, based on laws He has created – like the three laws of motion and the laws of union. He does not need to "reach out" into substances and change their positions.

4.4 Conclusion: Body-body interaction is not occasionalistic

In the introduction of *Nicolas Malebranche Philosophical Selections* Nadler points out that, "Malebranche and other occasionalists, such as Géraud de Cordemoy and Louis de la Forge, are arguing that motion must ultimately have its source in something higher than passive, inert extension of Cartesian bodies…". La Forge does not deny this, but this also does not commit him to occasionalism because La Forge advises that there are general and particular causes. The general cause is the divine will and there are two particular cause, corporeal and spiritual.

Mind and body both have the same power, which is to determine motion but, because mind-body union is the true union, mind-body cases are the exemplar cases and not the exception. As such body-body cases mirror what we have discovered in the mind-body cases. Body-body cases are not considered as true unions, but one body does interact with another body, in determining motion, via their shared proximity and dependence and, communicate (or act according) to God's set laws – the three laws of motion.

God (besides creating motion) conserves the world and the laws set by Him (three laws of motion and laws of union) and are grounded in the divine decree. This does not make La Forge an occasionalist nor is it incompatible with La Forge's metaphysical stance – that there is both universal and secondary causation, and that bodies and minds are subjects of both. God is the total and efficient cause of all motion in the universe in the sense that He creates and conserves the total quantity of motion. Minds and bodies are finite substances that act as secondary causes. While minds and bodies lack the omnipotent power that God has, they are not required to do the same work as universal causes. The causal connection that secondary causes have to their effects is not at all like the divine decree. Furthermore, La Forge tells us (and Nadler agrees), that mind-body union, and their interaction, are based on equivocal causation. Equivocal causation posits that the effect does not resemble the cause. Since, body-body cases mirror the mind-body cases in this respect, body-body interaction must also be based on equivocal causation. Like the case of mind-body causal interaction, resemblance is not at work in body-body causal interaction. But what La Forge does offer in its place is an account of proximity which has bodies interacting based on their shared relations of mutual proximity and dependence. However, contra to Nadler, La Forge is not a pseudo occasionalist meaning he is not an occasionalist in regard to body-body cases and an interactionist in regard to mind-body cases. Rather, there are different types of causation in the world, universal and secondary causation, and the secondary causes are conserved by God and God communicates with the particular world based on the laws He has set for His creatures. The three laws of motion for body-body and the laws of union for mind-body. His conservationism is not reduced to continuous creation. God does not have to recreate anew each body or mind with their respective modes and properties. God creates the world but has minimal involvement.

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