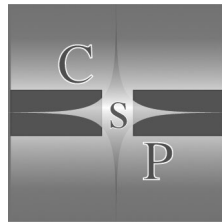


Mediations in Cultural Spaces

Mediations in Cultural Spaces:
Structure, Sign, Body

Edited by

John Wall



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*In memory of Des Kelly, who now lives nowhere
yet seems not lost to the spatial world.*

There are many rooms in my father's mansion.
—Ancient Sumerian saying

Here is my only elsewhere.
—Samuel Beckett, *Malone Dies*

*We...have dreamt the world. We have dreamt it as firm,
mysterious, visible, ubiquitous in space and durable in
time; but in its architecture we have allowed tenuous
and eternal crevices of unreason which tell us it is false.*
—Jorge Luis Borges, “Avatars of the Tortoise”

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INTRODUCTION

An empty drawer is *unimaginable*.
It can only be thought of.¹

When speaking of cross-cultural events it may seem presumptuous to couch the debate in the discourses of postmodernism. For one, the term postmodernism itself is something of a floating signifier and as such may describe everything under the sun and therefore nothing. In addition, it is a term that derives primarily from historical circumstances in North America and Western Europe; thus the universality eschewed in its discourses would be reinstated with reference to difference. The Enlightenment project to inform all human societies as to their true being would be superseded by the mission to inform them of their true nonbeing. Logical contradictions aside, the deconstructive tendencies of postmodernism, together with the critique of formal universalism, provide invaluable mechanisms for the discussion of cultural difference, especially when it comes to variations on the production of space.

In a monumental essay on postmodernism in North America, and to a lesser extent, Europe, Fredric Jameson makes the telling point that central to the critical discourses and practices of contemporary society is the category of space. Architecture, Jameson argues, has become the privileged language of the aesthetic, primarily because of its close relation to a capitalism voracious in its drive to transform all experimental and aesthetic activity into the commodity form.² At the same time contemporary architecture is engaged in the deconstruction of received paradigms of built-space that characterize the aggregations of modern societies with their suburbs, agora, industrial zonings and connecting arteries. Architecturally, Jameson speaks of the way buildings like the Wells Fargo Court in Los Angeles in its apparent two-dimensionality creates the effect in one who encounters it of a stereopticon, momentarily displacing the solidity of the earth.³ In other buildings like Charles Moore's Piazza d'Italia and the Westin Bonaventure Hotel in Los Angeles,

¹ Gaston Bachelard, *The Poetics of Space*, xxxiii.

² Fredric Jameson, *Postmodernism*, 5 & 16.

³ Fredric Jameson, *Ibid.*, 13.

Jameson remarks a free-floating space insulated from the outside world in such a way that it creates its own exteriority inside the massiveness of the buildings, thus displacing the inside/outside divide and creating a space that is yet to be mapped by consciousness.⁴ Along these lines, sociologist of architecture, Henri Lefebvre insists on the necessity of supplementing established understandings of city space with new and original modes of analysis that articulate the permeability of strata and zonings in terms of rhythms—rhythms of history, language, migration, the body and of the modes of spatial habitation and production.⁵

While the architectural avant garde tends to position itself polemically in societies where the bulk of the world's resources have been amassed it is arguable that the discourses that emerge from it shed light on the ontological assumptions and material conditions surrounding the production of social space in general. In particular Jameson holds that contemporary practices and theories of space point to a reappraisal of the way space is structured in and by systems of representation, suggesting that contemporary architecture has precipitated the "limitations of figuration" and the necessity "to grow new organs, to expand our sensorium and our body to some new, yet unimaginable, perhaps ultimately impossible, dimensions".⁶

The contingency that is spoken of here is not simply that of an object but that of representation itself, given that variations of spatial representation bring about variations in the perception and experience of space.⁷ Jameson observes that in general, postmodernist art has introduced what he calls a "new depthlessness", repudiating the depth models of thought based on the binary pairs of inside/outside, essence/appearance, latent/manifest, authentic/inauthentic and signifier/signified.⁸ Of course this is a commonly expressed claim of postmodernist thought and arose with the (post)structuralism of thinkers like Barthes, Derrida and Deleuze. Of interest here, however, is less the social-empirical veracity of such claims than the fact that the spatial dimension of depth is seen also to be a dimension of thought. Thus, it is not just that practical and intellectual orientations to space stem from particular representations, but that representation itself is primarily spatial, where thoughts, intuitions and images are laid out according to a spatial arrangement. This, it may be argued, forms the basis for the contemporary concern with space across

⁴ Fredric Jameson, *Ibid.*, 13 & 100.

⁵ Henri Lefebvre, *Rhythmanalysis: Space, Time and Everyday Life*, 94-96.

⁶ Fredric Jameson, *Ibid.*, 34 & 39.

⁷ Jean Piaget, *The Child's Conception of Space*, 38.

⁸ Fredric Jameson, *Ibid.*, 12.

such varied disciplines as biology, physics, architecture, sociology, philosophy and literary theory amongst others. Space arises from, and in turn conditions, social and intellectual practices.

Precisely how variations in spatial representation occur, when in fact it would seem, as Descartes believed, to indicate a state of permanence of one thing in relation to another, is a vexed question. On the one hand, space is constituted as the relative measure of things, their coordination and the dimensions that bring a thing into relief. Hereclitus's claim that everything exists in a state of flux would seem not to have taken cognizance of place. In fact what Hereclitus means is that place itself is relative with no fixed reference from which to establish enduring coordinates for anything. The apparently contradictory thought that all place is in motion led thinkers like Aristotle and Plato to seek out an ontological notion of place that might make individual things more secure in their place. To no avail, however; Plato, the writer of the *Republic*, where it was proposed that all artists and other proponents of the "irrational" be excluded from society, arrives at the notion that the being of space, that is, immeasurable space, was something that could only be apprehended by a kind of dream thought or "spurious reason".⁹ Aristotle, on the other hand, settled for the notion that space might be considered as an enormous and invisible container that guaranteed the placement of individual things. However, he also acknowledges that such a container was something accessible to nonempirical thought only.¹⁰ While Plato lays out his world according to carefully crafted geometric similarities the search for the ontological conditions of this cosmic order takes him into uncharacteristically esoteric thought:

And there is a third nature, which is space and is eternal, and admits not of destruction and provides a home for all created things, and is apprehended, when all sense is absent, by a kind of spurious reason, and is hardly real—which we, beholding as in a dream, say of all existence that is must of necessity be in some place and occupy a space, but that what is neither in heaven nor in earth has no existence. Of these and other things of the same kind, relating to the true and waking reality of nature, we have only this dreamlike sense, and we are unable to cast off sleep and determine the truth about them.¹¹

⁹ Plato, *Timaeus*, 1179.

¹⁰ Edward Casey, *The Fate of Place*, 55.

¹¹ Plato, *Ibid.*, 1178-79.

In line with the general Platonic trend, Plato seeks out the Idea of space that would vouch for its reality. Here, however, the usual repertoire of philosophical instruments—reason and wisdom—seem insufficient to the task, and to this end it is instructive that *Timaeus*'s story was originally related to his ancestor by a priest of the Elysian mysteries.¹² What puts Plato off the trail is that the Idea of space that he dwells upon lacks positivity and is instead defined negatively as a philosophical refitting of the void of ancient mythology.¹³ Plato seeks out that element of space that cannot be mapped according to mathematical and cognitive categories; namely, its negative quality of displacement—a kind of Derridean or Deleuzian differential.

In fact, it may be argued, the reason Plato cannot find an ontological formulation of space amenable to rational discourse is because it is right in front of him, looking him in the face. In the *Timaeus* Plato imposes upon the ancient theory of the elements the mathematical logic of Pythagoras. The world according to Plato is held together and made available to rational cognition through the laws of geometry; that is, of language and number. This is not to say that what Plato missed in his musings was that space is constructed through language in the same way that for Kant it is constructed by perception and cognition. Plato knew well, along with Bachelard that “inhabited space transcends geometric space.”¹⁴ It is the case that for Plato language was simply the vehicle for the expression of the ontologically higher-ranking Idea, and therefore he was not able to discern that, in addition to a spatial calculus, language is part of a larger symbolic system that constructs reality. The difference between thinkers like Plato and Bachelard is that for Plato the transcendence of language goes in the direction of the abstract Ideal, whereas for Bachelard it goes towards elemental reality, especially the body; the habitation of space is for Bachelard an act generative of space itself. While Plato sought out the generative principle of space he was unable to link it to concrete acts and the generation of meaning through symbolic systems.

The role of the everyday in the formation of concepts and experience of space entered modern philosophy with early twentieth-century psychology and the phenomenology of thinkers like Maurice Merleau-Ponty. In contemporary thought, a thinker like Michel de Certeau has revolutionized the way in which the highest abstractions of spatial representation operate at the level of the everyday. De Certeau argues that while official and often highly abstract discourses of space constitute

¹² Plato, *Ibid.*, 1157.

¹³ Edward Casey, *The Fate of Place*, 35-37.

¹⁴ Gaston Bachelard, *The Poetics of Space*, 47.

places like the city as an intelligible form it is everyday experience that makes space vitally meaningful at both existential and intellectual levels. Official representations of space—three-dimensionality and cartography, for example—constitute space as a set of received principles, as a coherent, rational, predictable system:

Is the immense texturology [the city seen as a panoramic view] spread out before one's eyes anything more than a representation, an optical artifact? It is the analogue of the facsimile produced, through a projection that is a way of keeping aloof, by the space planner urbanist, city planner or cartographer. The panorama-city is a "theoretical" (that is, visual) simulacrum, in short a picture, whose condition of possibility is an oblivion and a misunderstanding of practices.¹⁵

The official images and schematic diagrams that pass for the identity of a city are insufficiently anchored in experience to warrant the status of spatial representation. For example, the iconic London Underground map serves excellently as a guide to the Underground system, but, according to the logic of de Certeau's argument, it serves poorly as a guide to the city itself precisely because of its high level of abstraction.

For de Certeau, the generative principle of space lies elsewhere in what he sees as the interstices of official representations of the city:

The ordinary practioners of the city live "down below," below the thresholds at which visibility begins. They walk—an elementary form of this experience of the city; they are walkers, *Wandermänner*, whose bodies follow the thicks and the thins of an urban "text" they write without being able to read it. These practioners make use of spaces that cannot be seen; their knowledge of them is as blind as that of lovers in each other's arms. [...] Within this ensemble, I shall try to locate the practices that are foreign to the "geometrical" or "geographical" space of visual, panoptic, or theoretical constructions.

The "other spatiality" that de Certeau seeks out is not a non-space, nor is it the negation of space; it is rather the otherness within space that makes it fluid and dynamic. For the purposes of de Certeau's analysis, walking in the city is not necessarily a purposive and self-conscious act. The point is simple; that the way in which a city is inhabited determines it as a collective space. This consideration does not negate the efficacy and power of the formalised conception of space. The city, or space in general, is a representation, constituted out of certain considerations particular to

¹⁵ Michel de Certeau, *The Practice of Everyday Life*, 92-3.

representation itself. In addition, such space is constituted of a logic of becoming—a generative principle.

De Certeau goes on to make an analogy between the city or space in general and language. The city is language considered as a system, self-sufficient and self-referential. When we speak or write the signified comes into existence according to arrangements already made in society. And in this way the linguistic system reproduces itself. On the other hand, it is not necessarily the case that any speech act simply reproduces meaning, given that the latter is contingent on things that fall immediately outside the systemic properties of language—the body, sound, rhythm and collective predicament. Likewise, for de Certeau, walking or inhabiting space is like a speech act. The city dweller walks, carving out his or her own route, within limits, dreaming, remembering and interacting with architectural and material elements. In this way is lived space generated.

In a similar way, this collection of essays seeks out the practices whereby cultures generate representations of space and spatial representations, as opposed, let us say, to their simple reproduction. We may mention that most controversial of spatial designations, the East and the West. The essays in this volume engage with the fluid, unstable and eminently pliable interstices of these notional geopolitical and highly ideological designations. In the current political climate, any attempt to identify and interpret the patterns by which Eastern and Western cultures evolve, implement and destroy lived and imagined space is invaluable. At the same time, in the discussions that gave rise to these essays, and in the essays themselves, there is a marked reluctance to represent the East-West dimension in terms of S. Huntington's and B. Lewis's "clash" thesis. In these essays the East-West dynamic is made up of interlocking systems with no clear, or even at times, readily discernible point of demarcation. Thus there is stress on the permeability of borders and not the facticity of identity. Of course, it is not as if these borders do not exist. Rather, the authors of these essays demarcate spatial differentiation in terms of cultural practice, history, conflict, politics and intellectual activity as opposed, for example, to the narrowly conceived, if very real, symbols of national culture. The theoretical interest lies in the intertwining of systems of knowledge, desire, materiality and the way in which, according to certain centres of gravity (paradoxically a shifting phenomenon), spatial demarcations and overlappings are constituted at the level of the symbolic and thus the socio-psychological.

From a conceptual point of view, the aspect of space that is of interest here is not the mathematically represented space of physics and the natural

sciences. Rather, the essays of this volume address themselves to the formation of social spaces—of both a symbolic and practical nature. Furthermore, as representational space conditions spatial practice in general (a thing or an idea, even time is represented as spatial), the mediating quality of space is of interest to the humanities and social sciences alike. Thus space is a highly particular representation; from a phenomenological point of view, as shown above, it combines actively the body and symbolic systems like language, number and design. At a time when there is intense theoretical and political interest in the nature of concepts and practices of representation, research into the nature of space may yield insights concerning the intertwined nature of language, body and symbolic systems. The papers collected here propose that there is something at stake in the hermeneutics of spatial dynamics; it may concern power, gender, architecture, sculpture, music, technology, but in these essays, the question is always brought back to critical and interpretative treatments of representation and the way those representations shape and are shaped by experience.

These essays are by no means uniform in their approach to space. In some papers embodiments of social space may be the outcome of violent manipulation, while in others it arises out of ritualistic engagement with the elements, birth and death. Others explore the role of science, philosophy, religion, art, literature and law in the production of space. Some of the papers adopt an empirical method, others phenomenological, deconstructionist, pragmatic-analytical. In all of these approaches there is discernible an attempt to *model the mediating forms* that constitute the representation of space.

At a general level the point of insertion into the phenomena of space is fourfold: the essays in Part I, *Concepts of Space*, probe conceptual formulations of space, enquiring into classical Western and Islamic formulations as well as contemporary body-oriented notions. Part II, *Cultures of Architectural Space*, looks at architecture and the way it acts as a magnet for diverse cultural forces, sculpting out epoch-defining “enclosures” and “openings” that variously press cruelly on the body, harmonize mind and body and transform social relations. The essays in Part III, *Songs of Space*, examine cultural space specifically in terms of the representational activities of music, sculpture, literature and painting. What all three have in common is something like a performative dimension, exploring the points at which representations break down and facilitate the eruption of a dynamic spatial differential. Finally, the fourth set of essays, *Invisible Cities*, look at various interpretations of “virtual” spaces in the diverse terms of the relations of religious spiritualism to

material space, the playing out of politics and myth-making in advertising space and the role of the Internet in the democratic political and public space.

The conceptual essays in Part I, *Concepts of Space*, explore the way in which the formalised concepts of space incorporate elements of the material world, reflecting it back to itself transformed by the efficiency and reductiveness of conceptual discourse. Of particular interest in all of these essays is the human body and the degree to which it is implicated in symbolic thought. In all three essays, albeit in different ways, it is recognised that concepts of space are formed in *relation* to materiality and so do not constitute a mold that shapes material exclusively according to abstract formulations. In fact, it is argued that the mind/body dualism, so prevalent in Western thought, may be displaced by looking at the way in which the body itself, or the materials out of which social space is constructed, impinges on conceptual formulations of space. Furthermore, all three essays here ask of the ontological nature of spatial representations themselves, thus articulating problems connected with “space of signification” as well as “space of things”.

Part II, *Cultures of Architectural Space*, explores discourses and practices of architecture, ranging from the Middle Ages, the nineteenth century (the age of the Panopticon) and postmodernism. This collection introduces three essays on architecture, all dealing with the cultural, political and intellectual components that impinge directly on the way we shape our world. These essays come from regions and subjects as diverse as Western Europe and its prisons, the USA and Europe of “fractal edge” design—enlightenment for the body, and the mimetic architecture of the university in north-western medieval Iran. Specifically, these essays examine spaces that both liberate and oppress; namely, the prison, university, and glass-cement structures that foster the transformation of border space into movement across permeable frontiers.

Literature and art, religion and advertising may all be said to generate a highly virtualised kind of space. That is, the kind of space that in Enlightenment thought might be said to exist primarily in the mind. Of course, such “mental space” is an integral element in the spatial character of the physical environment. In this way, spaces are “imagined” into being and space becomes highly malleable, limited by the nature of material, the patterns of thought and the norms of cultures. Moreover, through these activities, cultures and sub-cultures create distinctive “mappings” of personal, social and metaphysical realities. On their own, of course, these cultural spaces are of immense interest and importance. But when exposed to the comparative method their individual features take on a special

resonance. What is proposed in Parts III and IV of this volume, *Songs of Space and Invisible Cities*, is a convergence of spaces that are not initially compatible with each other. These essays treat cultural space as a kind of laboratory. One essay follows an Antipodean singer/songwriter—Nick Cave—from the Atlantic extremities of Europe, through its “cultural capital”—Paris—and on to one of the great cosmopolitan cities that spans, geographically and culturally, Europe and Asia; namely, Istanbul. The author notes the particular cultural elements of the concert spaces, their similarities (mainly commercial) and the way in which these varied cultural spaces determine a series of performances as radically different from each other, when in fact objectively speaking, the three performances are identical. Thus generalized, cultural space has the power to transform and modify the artifact.

Other essays in these two final sections deal with the politics of painting and the encounter of the three-dimensional painting system developed during the European Renaissance with the “two-three” dimensional system developed in Ottoman, Persian and Arab societies. In particular, an interpretation is offered of Turkish writer Orhan Pamuk’s novel on the early seventeenth-century clash of “Eastern” and “Western” practices of artistic and intellectual space. A third essay on art and space takes up the Heideggerian critique of the western philosophical construction of space as a kind of object. This essay offers a reading of contemporary sculpture using and developing Heidegger’s notion that space comes into being in a perpetual becoming.

Part IV, *Invisible Cities*, explores discourses on “cyber space” offering essays on three radically different fields: politics, religion and women in republican Turkey; the “colonization” of North American media space by Turkish advertising; and finally, an exploration of the way new communicational technologies have transformed political space in Irish and West European culture.

John Wall

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Part I
Concepts of Space

CHAPTER ONE

THE ONTOLOGICAL (DIS)EMBODIMENT OF SPACE

EMRE AKBIL

Abstract: The following dramatic dialogue enquires into the presence and nonpresence of the body in ontological conceptualizations of space. It brings together a number of theoretical interventions that have come to be considered as constitutive of discourse on the ontology of space. Emre Akbil's intervention reflects critically on the received ontologies of space with their implicit edifices, armatures and neurological pathways. In addition, the bringing together of these theoretical positions has a performative dimension; the textual space which frames the event of this dramatic conference itself becomes a kind of space, that of signification or the event of meaning. Thus ontologies of space are themselves virtual textual spaces through which the absent body is refracted. "Teleporting" is not just a science-fiction fantasy but an historical practice!

There is nothing outside the (con)text¹

The question "what is space?" presents itself as a vast and dense subject. It consists of so many facets and conceptual currents, all of which cannot easily be related in a single textual document in a way that would be readily apprehensible by the delicate tendrils of cognition. (This is not to mention the pitfalls inherent in any one ontological representation of space). With this in mind the textual event that is this essay has been staged as a seminar. It has been organized in such a way that questions raised may lead to discussion and argumentation. The questions that inform this gathering of ghostly voices concern variously the existence or ontological status of space and spatial entities, the nature of the

¹ Jacques Derrida, *Limited Inc.*, trans. Samuel Weber (Evanston: Northwestern University Press, 1988) 136.

relationship between space and corporeal subjects and the manifestation of the virtual in space and spatial experience. In particular, I will ask whether bodily presence is a sufficient condition for the perception of space and inquire into the relationship between the virtual and the physical.

In this seminar, the virtuality of text and memory allows us to bring together in discussion the ideas and epistemological characteristics of thinkers who are distant in terms of time and space. Mutually distant voices and discourses will come together in the common space of virtuality, which will be constituted through the textual medium.

Space opens itself to discussion in terms of the experience and concepts of temporality as there is no clear image, idea, appearance or concept of space. A huge range of thinkers, philosophers and scientists have been involved in discourses on space throughout history, yet everything said is contradictory, confusing and unclear. Still, past obscurity does not allow us to despair that the discourse on the ontological considerations of space will not some day attain philosophical clarity. It is important, however, that clarity not be achieved at the expense of complexity; all discussion of space is haunted, if you will allow the expression, by the ontological question of whether or not the subject under discussion exists or not. The constituent parts of space, if any, are of course another concern.

The scope of the seminar then is defined primarily by concern with the existence or nonexistence of space as an entity. Stemming from this initial concern is the hypothesis that space exists as an accumulation of spatially located entities. Of course the possibility that the generation of space involves embodied perception must not be neglected. And finally, the participants in this polylogue will consider the correspondence or discontinuity between the perception of space and its objective existence.

The seminar itself takes place in a singular structure attached firmly with enormous steel straps to the rocks that mark the edge of a vast ocean. The structure is totally enclosed and is artificially ventilated and lighted. Everything possible has been done to minimalise connections between the interior space of the structure and the external environment. The highest quality sound insulation barricades this interior space of quiet, intense, sober cognition and discourse against the roar of the huge, oceanic waves crashing down onto the rocks below. The only access to the structure is a bridge that connects the rocky outcrop to the mainland. The exterior of the elliptical structure is covered entirely with reflective coating. Inside, the space is dominated by the splendidly curved surface of the elliptical ceiling, homogeneously lighted by halogen lights. The floor is covered totally by a smooth woollen carpet black as only can be achieved by the

technology of modern dyes. Wooden Loydian chairs with vertical postures are arranged facing towards a minimally raised stage, where a group of individuals are meditatively positioned. The auditorium is full with the exception of one empty chair, which is situated near the front.

Author: The first set of questions will be directed to Isaac Newton, Gottfried Leibniz, Immanuel Kant, Henri Bergson, and Martin Heidegger. To begin, Sir Isaac Newton, would you be so kind as to please guide us through the notion of Absolute Space, which still generates turmoil even today in this age of non-absolutes.

Isaac Newton: Space is here being put into question, but it is at the same time the thing whose very existence is unquestionable. *Space is!* It is absolute! It exists as an independent, homogeneous entity, and it is immovable and identical with itself. Perception differentiates between points within the homogeneity that is space, because the perceptual apparatus is designed to distinguish differences between two or more positions within space; our left and right eyes acquire two separate images from the similar qualities present in homogeneous space differentiating them through the faculty of perception. Consequently, space is perceived as heterogeneous despite the fact that it is homogeneous. It is this heterogeneity of space that constitutes its relativity in so far as it is conceived through the perception of the sensible objects.

As such, the heterogeneous dimension of space is not an a priori condition for the existence of true and absolute space. Objective space, that is, mathematical space, is independent of the sensible objects that are located in space. Absolute space and time are immutable, meaning that if all their contents were to be subtracted till total emptiness were reached, there would still remain the existents of space and time. Sensible objects merely inhabit a space and time that exist independently of such inhabitation. Space is a plenum of emptiness independent of bodies, organic and inorganic, their acts and movements.²

A voice rises from amongst audience. It is barely audible at first and seems distant in time and space from the intense immediacy of the Newtonian discourse. The voice gains in volume and clarity until it commands the entire auditorium as if it had inhabited the space, always. Seen from the perspective of the main stage, a red-faced man is on his feet at the very

² Isaac Newton, "Absolute and Relative Space, Time, and Motion", *Principia: The Mathematical Principles of Natural Philosophy*.

back of the auditorium, modestly but firmly asserting his right of a say in the matter. It is none other than the Bishop of Cloyne, the very Reverend George Berkeley from County Cork standing there, a stout body on thin legs, seemingly hovering above the uncannily smooth surface of the black carpet, blinking in the white glare of the halogen lamps.

George Berkeley: Of course, all that has been said by young Newton is of immense interest. However, I suspect that he is drawing the wrong conclusions from the content of his deductive reasoning. Concerning this I would like to offer a corrective argument. It would seem that Mr Newton fails to recognise the limits of space and the annihilation of space. The claim that what remains after the annihilation of all sensible objects is absolute and true space rests on this failure. Pure space, we should know, is nothing more than the absence of all resistance, something which could be conceived by the limbs of our bodies.³ With the annihilation of such a resistive sense, we in effect annihilate the very notion of space. Space is made up of what is today called “kinaesthetic” and “tactile” aggregates assembled through our bodily motions as they encounter resistance. Now I have arrived at a question that I would like to direct to Mr. Newton: Can motion exist in the absence of external relations? Can motion be isolated from its context and resolved in absolute space as a singular object in motion through the plenum of emptiness?

Isaac Newton: First let me say it is always an honour to engage with the sincerity of the pre-revolutionary thinker. I have read and continue to admire the work of Bishop Berkeley. Of course he and his generation lacked the advantages of a comprehensive mechanics. Now, to address the Bishop’s pertinent questions; in order to formulate the concept of motion, it is essential to identify the bodies which are at rest in the environment of absolute space. Such a body, it must be stressed, is not conceivable through the sensation of any proximal objects. It is therefore not possible to distinguish motion through perception. Absolute places are positions in space, which contain a body with all its parts; and absolute motion is the translation of such a body with all its parts from this absolute place to another absolute place. For example, in order to define absolute space we should first define a body which is contained in another body, a ship, followed by the ship’s position on the planet, the planet’s position in the galaxy, and the galaxy’s position in absolute space. As a result, the

³ George Berkeley, “Criticism of Newton’s Doctrines on Space”, *The Principles of Human Knowledge*, 109-16.

ultimate position of a body is determined by its absolute place and this position is out of the reach of perception. Consequently any one body in absolute space does not require, for its spatial existence, consideration of the relation to any other body through the phenomenon of motion.

Author: Although it is not the main concern here, the concept of motion falls into our discussion as a constitutive element of the spatial existence of bodies. Moving on, however, I now propose that issues concerning the hypotheses of homogeneity and heterogeneity of space be extended through the terms of a discussion of the Leibnizian Monad.

Gottfried Leibniz: It's good to be back! Simple substances, what I have termed Monads, are basic substances that constitute aggregations, known as composites. And, it is through composites that extensivity is made possible. Each monad as a constituent of a composite has unchangeable qualities that can be asserted in terms of external cause.⁴ But as nothing created can ever remain the same and retains always the same qualities there ought to be internal qualities which are subject to change. Even though monads have no parts that would allow them to attain qualities, as for example is the case with the molecular cell, I have heard they do have a plurality of conditions and relations. As I have also stated in aphorism number fourteen of the *Monadology*, “the passing condition which involves and represents a multiplicity in the unity, or the simple substance, is nothing else than what is called perception”.⁵ Mind you, such a perception must be differentiated from the purely mechanical definition of perception, as formulated by my colleagues during the eighteenth century. No, here perception refers to an experience, a faculty as it later came to be known, that extends beyond the purely empirical, beyond even the ratiocination of consciousness. For this kind of perception the term “soul” is reserved, where “soul” refers to the point at which substance, qualitative perception and memory converge.⁶

Having defined the simple substances and their basic properties, we can go further to define the plenum of simple substances. Given that all of space is filled up, all matter is connected accordingly. The results of this connectivity are explained in the “*Monadology*”.

⁴ Gottfried W. Leibniz, “*Monadology*”, *Discourse on Metaphysics and the Monadology*, aphorism 10.

⁵ Gottfried W. Leibniz, *Ibid.*, aphorism 14.

⁶ Gottfried W. Leibniz, *Ibid.*, aphorism 19.

In a plenum of filled space every movement has an effect upon bodies in proportion to this distance, so that not only is every body affected by those which are in contact with it and responds in some way to whatever happens to them, but also by means of them the body responds to those bodies adjoining them, and their intercommunication reaches to any distance whatsoever. Consequently every body responds to all that happens in the universe, so that he who saw all could read in each one what is happening everywhere, and even what has happened and could read in each one what is happening everywhere.⁷

It is this interconnectivity that fills the complete plenum, the interconnectivity of qualities where there is no emptiness, but instead a heterogeneous plenum constructed of simple substances. Although monads are representations of the unity of the universe, as a result of the interconnectivity indicated previously, the monad has a relative quality and thereby cannot acquire full or absolute knowledge of the universe, because it is “limited and differentiated in the degree of their distinct perceptions.”⁸ Thus any being (other than God) has limited knowledge due to the degree or capacity of their perception; anything perceived by any being does not contain truth but just a portion, a section of truth.

Author: We have reached the point where we have obtained two opposing concepts of space; first, of a plenum of emptiness/homogeneity; and second, of plenum of simple substances/heterogeneity. We can say that we have two sets of possible characteristics of space. But both of these spatial understandings or constructions exclude the involvement of the mind. Newton has posited an abstract and mathematical kind of existence for space, whereas in Leibniz’s methodology the existence of space is constructed on the basis of simple substances (ontology of simple substances). We see though that one dimension is missing from the several accounts, and that is the metaphysical unfolding of the concept of space. Immanuel Kant takes up this problematic and investigates the contribution, if any, of mind to the formulation of concept of space.

Immanuel Kant: Let me just say that I am happy everything is going according to schedule today. I would like to begin my dissertation with a statement that runs directly counter to common sense; space is not an empirical concept. That is to say, the representation of space cannot be obtained from the experience of external objects alone. Rather, the

⁷ Gottfried W. Leibniz, *Ibid.*, aphorism 61.

⁸ Gottfried W. Leibniz, *Ibid.*, aphorism 63.

representation of space derives from a priori categories of perception and cognition, which are prerequisite to the reality of external experience. If you will permit me this analogy, of which I am very proud, in the same way that information storage devices like floppy discs and CDs have to be formatted in order to be used in the information media, the intuition of the concept of space is there to make possible the perception of external objects on the basis of this structure. Space is essentially one whole thing; it is never absent from the world, but, in fact, it can be emptied of its contents. The structure of our perceptual and cognitive faculties necessarily gives us our experience in terms of space. Thus, we cannot represent to ourselves the absence of space, but we can represent the absence of substances within that space. This result comes from the pure intuition of space. Proof that space is a form of pure intuition can be obtained by analyzing the principles of experience in so far as it is defined in terms of exterior objects of perception. Such derivative experience cannot result in universal truths but rather corresponds to relative concepts that may be obtained through the processes of induction. Space is not a relative concept which changes the number of its dimensions— x , y , z —through trained knowledge.

All things such as outer appearances exist side by side in space. Here the phrase “outer appearances” signifies a state of being whereby external objects are only intuited as the appearance of a thing and not the thing-in-itself. Thus it is said: “space is nothing but the form of all appearances of outer sense.”⁹ We can follow what is being said more clearly by referring to my “Transcendental Aesthetic”, Section I, Conclusion b:

The receptivity of the subject, its capacity to be affected by objects, must necessarily precede all intuitions of these objects, it can readily be understood how the form of all appearances can be given prior to all actual perceptions, and so exist in the mind a priori, and how, as pure intuition, in which all objects must be determined, it can contain, prior to all experience, principles which determine relations of these objects.¹⁰

The intuition of the object, which exists in mind, does not in any way precede the being-in-the-world of the object itself. That is to say, the appearance of the thing gained through the intuition of the concept of space does not precede the thing-in-itself, although, if you will allow me an aside, the Cartesian “thought” does exist independently of its object, which in turn exists in extension—what is called the thought-extension

⁹ Immanuel Kant, *Critique of Pure Reason*, 71.

¹⁰ Immanuel Kant, *Ibid.*, 71.

duality. Intuition itself may be defined as a direct representation such that “in being affected by objects, it obtains immediate representations, that is, intuition, of them.”¹¹ Knowledge of the object is then based on a synthetic process. But this synthesis is not derived from experience that is a posteriori. Instead what we are dealing with here is a synthetic a priori process. Geometry, for example, is “synthetic knowledge”, of a kind which determines the properties of space synthetically. But geometry is a priori synthetic knowledge, which means that it is bound up with the consciousness of its necessity. Thus geometry as a synthetic a priori knowledge is not subject to judgments and is not empirical in this sense. The intuition of geometric properties of space is based in the subject structure and is triggered by the representation of the exterior object. Consequently the notion of space together with a priori synthetic knowledge, like geometry, are elements for the constitution of mind, but mind itself does not partake in the formation of a space or its objects which can then be said to have an objective, external ontological status.

Author: We have at least one viewpoint till now, which describes the process through which mind constitutes the notion of space and how it relates to external objects. Before proceeding with other possible constructions of such concepts, perception of space, I see Mr. Henri Poincaré present in the audience. I think you would like to add some points to what has recently been said.

Poincaré: As I do not have too much time I will try to be precise and get directly to the point. If geometric space is a form of intuition, which provides a frame, structure, imposed upon our sensations it follows that we cannot represent any other form of motion which falls out of this frame. It also means we cannot imagine another form of geometry (as synthetic knowledge) other than the one imposed by such intuition. If we presuppose Euclidean geometry as the intuitive notion this means that we cannot present any other geometry other than that of Euclid’s.

Is Euclidean geometry irreplaceable? The truth is Euclidean geometry is just one of the possible geometries out of many possibilities. If we introduce another (non-Euclidean) geometry and prove its possibility, the presupposition constructed above—geometry being intuitive—will prove to be wrong. To do so will not be hard. Euclidean geometry is the study of the laws by which invariable solids move—that is what a point is, an

¹¹ Immanuel Kant, *Ibid.*, 71.

invariable solid.¹² On the contrary we know that all solid bodies change form while in motion, bringing out the conclusion that there exist non-Euclidean geometries (we can today add to this Riemannian geometry of space/time curvature).

Geometry is nothing more than the study of movements of abstract, ideal solids in uniform, homogeneous space. Rather than utilization of natural solids we build the notion of geometry upon ideal solids, which are nothing more than the approximation of natural bodies. Thus it is wrong to claim that geometry is not empirical. Hence it depends on experience, but such an experience and induction as are derived from abstract and approximate notions.

Author: It is essential that we deepen the present subject—the sensation of external objects and construction of representations out of spatial elements—as it leads to the very essence of the notion of space itself. Mr. Bergson, I think you are willing to carry on with the further deepening of the subject.

Bergson: I would continue from the point where Poincaré left off. We speak of matter as being extended and then we decompose this extension by removing the tension of it and isolating it within a laboratory of pure, absolute space. Thus removing every quality that constitutes space, we focus on the particles and the behaviour of particles. Even though there may not be found any isolated system that sustains in nature, our sciences continuously tend to isolate certain systems from others. Consequently we may say, “it moves while changing positions in space but it does not change internally.”¹³ I must agree with Poincaré when he says that geometry is a science of the movements of invariable objects. What we call movement is just a snapshot of positions of inert objects, which are animated by our consciousness. Such misrepresentations and misinterpretations of external events and acts are all resultants of what I call “the cinematographical mechanism of the intellect.”¹⁴ We can elaborate this with the chain metaphor; if each link of the chain is removed we may not be able to reconstruct the chain again. This is the method of positive sciences. But this is not a pure intellectual activity for the sake of intellectuals. Fixation of concepts and isolation of systems are necessary for the reductionist positive sciences. We intellectually distort and simplify the natural notions and replace them with applicable and abstract

¹² Henri Poincaré, “Space and Geometry”, *Science and Hypothesis*, 87.

¹³ Henri Poincaré, *Ibid.*, 93.

¹⁴ Henri Bergson, *Creative Evolution*, 272-370.