Theory of Madness

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What we say must seem stupid to the regulators; the unbroken code of our enchanted,

inkantatory refreshment of the paraontological totality – theorizing what it is to hold some land

or what it is to be let to hold twenty dollars – is so much undercomputational nonsense to the

ones who cannot see the con/sensual, contrarational beauty of blackness, the universal machine.

(Fred Moten, *consent not to be a single being: The Universal Machine*)

The world "happens" while God calculates; if the calculation were exact, there would be no
world.

(Gilles Deleuze, *Difference and Repetition*)

Introduction

   The liberal intellectual milieu is in crisis. Trumpism is a kind of *reductio ad absurdum* of liberalism that has plunged the world into instability, war, and the end of American hegemony. Left intellectuals, though slouching towards nihilism, celebrate what they see as the end of a brutal empire. The ascendant fascists take delightful glee in genocide. But it is the liberal intellectuals who are truly in a bind. Their political system has utterly failed. Their carefully designed world order has disintegrated. They oscillate between mourning the end of America and hoping it can revive itself, just you wait until the next election. Throughout it all, a new technology is eating the world economy. Large language models, of which there is no coherent theory to speak of, are being hailed as the end of labor, drastically exacerbating economic polarization.

   The arrival of large language models is an event. Left-intellectuals flatly deny this, insisting they are glorified autocomplete machines. Fascists, again, take delightful glee at a machine that lets them sexually harass with deepfakes and lets them control the flow of information. Liberals, concernedly, are more and more aligning themselves with the fascists in this regard. Once-liberal Silicon Valley has taken a sharp rightward turn. Luminary after technical luminary is showing their alliance to a society of techological surveillance and the creation of a permanent underclass.

   This book is for the liberal intellectual who does not want to be a fascist, as well as left intellectuals who are dissatisfied with the state of left metaphysics. Assuming some training in formal logic and a grasp of continental philosophy, I am here to offer a diagnosis, intervention, and world-building for a popular philosophical front against the fascists. Here is the diagnosis. The philosopher-architect of the liberal subject is Kant. Philosophers of all stripes from Hegel to

Marx to Deleuze to Badiou loudly proclaim they have overcome Kant. But Kant's ghost is still the foundation of Western liberal political, juridical and metaphysical thought. Kant has not been overcome. The philosophical intervention can be summarized in five sentences. Representation is computation; the Badiouan event is uncomputable; the Kantian subject, bound by representation, is ruptured in an uncomputable event and gains the condition of possibility of intellectual intuition; intellectual intuition, so conceived, is not something reserved for God or the sages but something anyone who knows how to consent can have; consent lets you touch Deleuzian difference.

Now for the world-building. To overcome Kant is to overcome his prohibition on madness. Kant is a philosopher who dealt with madness by prohibiting it in panic. For philosophy is a theory of madness. Philosophers are those who circle madness, touching it, prodding at it, always in contact with it. This might be an unorthodox view of what philosophers do. Philosophers might look like erectors of rational systems, painstaking analyzers of long chains of logical deductions, or grand metaphysicians who make fantastical announcements that seem to verge on fiction. Or, more often today, they look like guardians of the crumbling regime, justifiers of empire, post-hoc rationalizers of technology. But every philosopher, I maintain, has a relationship with madness. It is not a coincidence that the Oracles of Delphi, a cult of divine possession, motivates the inauguration of Western philosophy. Some philosophers, like Kant, construct giant edifices to keep madness out. Some, like Deleuze, flirt with mad thoughts. Some, like Derrida, investigate its history. Some, like the average academic philosopher, use it as a boundless source of reductios: *why, but that thought is mad, it cannot be true!*

If philosophy is a theory of madness, psychology is a theory of its foreclosure. Psychology catalogs every feature of madness into limits, hierarchies, and bureaucracies.

Schizophrenia, in particular – the ur-mental illness, the official diagnosis of madness – is in effect the "other" bin the psychologists use when all other diagnoses fail. For while psychologists characterize schizophrenia with delusions, hallucinations, and bizarre behavior, the factor which constitutes schizophrenia is that the acts of the schizophrenic are unexplainable. Why the depressed person stays home in bed all day can be explained: he is sad and cannot interact socially. Why the psychopath murders people without remorse can be explained: he cannot feel empathy. But it cannot be explained why the schizophrenic takes a train to the other side of the country on a rainy midnight to walk blindfolded on a highway for hours on end, all the while claiming to hear God's little fairies whispering to her.

In a very oblique sense, this book is a memoir. It is a product of what I have wrestled with as I theorized my own madness. It is philosophy as a theory of madness. From the perspective of madness, every philosopher's endeavor looks like a loving gesture. The differences between philosophers, which they sometimes burned each other at the stakes over, seem to me reconcilable differences. As such, I do not seek to entirely demolish a philosopher's point of view, or to argue that one philosopher is right over another, but to rescue something from each while also moving past each. Every philosopher's view, to me, looks like a piece in a jigsaw puzzle that constrain and support one another. Deleuze mocked the person who looks to history and sees only federative, reconcilable differences, refusing to see its bloody contradictions, as a "beautiful soul". If that is so, a beautiful soul I will be, if a beautiful soul with a knife.

I do not think all difference is affirmable. This is the ethical wager of the book: there is unaffirmable difference. We must not think difference is essentially the object of affirmation as Deleuze would have us do. Sexual assault, for example, produces unaffirmable difference. I will

spend a good chunk of the book constructing a metaphysics of consent, and by extension, a metaphysics of sexual assault. Sexual assault, of course, is also bound up with madness. Studies show survivors of sexual assault, especially childhood sexual assault, are up to five times more likely to be diagnosed with schizophrenia. This is why, while maintaining a cordial relationship with madness, this book is not an endorsement or romanticization of madness in any way.

In the United States, up to fifty percent of persons experiencing homelessness have schizophrenia. Schizophrenia and material impoverishment have always been bound up with each other. I bring this up not to speak of social policy or politics. That is not this book's domain. If the metaphysics of consent is the book's ethics, its theory of money is the political and economic cashout. I will theorize money, and the monetary system, as a fundamentally psychotic system. By that I do not mean the mere platitude that capitalism is a mad system. I mean the emergence of money shares formal similarities with the emergence of psychosis. It is theorized that ancient Greek philosophy developed as a result of the spread of coinage. Coupled with my claim that the inauguration of philosophy is motivated by the mad Oracles of Delphi, this is the entanglement I will chase: philosophy, madness, and money.

Throughout it all, it is the metaphysics of consent that is always on my mind. By consent I do not mean the liberal juridical notion of *did you say yes or no?* Consent, I will argue, should not be characterized as the process of two rational beings who, operating independently of each other, decide whether or not to have sex. Not only is this picture wrong when it comes to sex, but it is wrong about the scope of consent. Consent, I will argue, is a metaphysical principle that holds the world together and generates new possibilities. Consent might displace money one day: if money is a violent and forced if historically necessary holding-together of the world, consent is its nonviolent, generative, and loving counterpart.

In contemporary times, where everyone is cynical, love itself is dismissed as mysticism. The dismissal of mysticism is what Kant's ban on intellectual intuition amounts to. In this book I seek to show a responsible kind of mysticism, one that does not make grand pronouncements from the altars, as it were, but clears the forest with the fire of formal logic before planting any seeds worth harvesting. So we will start with set theory and computability theory. Let us begin.

Difference and Event

> [I will have] the most *harmoniously* disciplined troops; consisting of vast numbers, and marching in irresistible power to the sound of *Music*. Is not this very mysterious? ...But then, what *are* these Numbers? There is a riddle –
>
> (Ada Lovelace, at her deathbed)

<u>Computability and Representability</u>

What is a number? A number troubles the relation between sign and reality. On the one hand, a number is a paradigmatical sign: when we say "three", we take it to refer to something like three objects in the world. On the other hand, the world as described by physics is nothing but numbers, and in our digital age, so many numbers such as a credit score, a bank account balance, and the number of followers on a social media platform determine our very real lives.

This book is concerned with four kinds of numbers: rational numbers, computable numbers, real numbers, and floating-point numbers. In this book, whenever I say "computable", I mean "computable by a Turing machine". Recall that rational numbers are numbers that can be represented by the division of an integer by another integer, such as ¾ or 0.75. Floating-point numbers are a subset of rational numbers used in computing, including large language models. Because rational numbers can be represented, and floating-point numbers are rational numbers, floating-point numbers can be represented.

But what does it mean to represent? There may be many definitions, but one possible definition is that what is representable is what is computable (by a Turing machine), and to represent is to compute (with a Turing machine). For example, the irrational number e can be computed/represented using the formula

$$e = \sum_{n=0}^{\infty} \frac{1}{n!}$$

In python, *e* can be computed with the program

```
def compute_e_digits(n_digits):
    scale = 10 ** n_digits

    total = 0
    term = scale
    k = 1

    while term > 0:
        total += term
        term //= k
        k += 1

    return total
```

We might see a limitation: the mathematical definition of *e* is an infinite sum, and so no python program can compute the value of *e* precisely. Because of this limitation, in the given program, *e* is computed up to *n* digits. But given infinite time and infinite space, and assuming that integers can be represented by infinite bits, the algorithm as given will be able to compute *e* to arbitrary precision. The example is here to illustrate a fork. "Computable", even "Turing-computable", is not strictly characterized. Some logicians use "computable" to mean a process that terminates in finite time; others use it to mean a process that can be characterized by a Turing machine that may never halt. For now, we will use the second definition: to be computable means computable given infinite time and space. For our definition, a number can be computable even if the program for producing the number never terminates.

One question that animates this book is whether computability equals representability: if I can represent something, can I compute it? If I can compute something, can I represent it? This question is difficult to answer because representation is a philosophical notion, whereas

computation is a mathematical notion. But I believe that philosophy and mathematics intersect here in a very productive way. To help us, let's turn to Badiou.

Badiou is a contemporary French philosopher perhaps best known for his magnum opus, *Being and Event*. In it, Badiou famously states: "mathematics *is* ontology" (4, Being and Event). For Badiou, mathematics is not merely an object of philosophy to be studied and dissected, but is a substantial part of philosophy in its own right.

> In order to address the relation between mathematics and philosophy, we must first distinguish between the grand style and the little style.
>
> The little style painstakingly constructs mathematics as an *object* for philosophical scrutiny. I call it 'the little style' because it assigns mathematics a subservient role, as something whose only function seems to consist in helping to perpetuate a well-defined area of philosophical specialization. …
>
> The grand style is entirely different. It stipulates that mathematics provides a direct illumination of philosophy, rather than the opposite, and that this illumination is carried out through a forced or even violent intervention at the core of these issues. (7, Theoretical Writings)

Badiou says philosophers of mathematics who work as if mathematics were a mere object of philosophy are purveyors of the "little style". He squarely positions himself as a practitioner of the "grand style", which uses mathematics not as an object of study but as the spine of philosophy, which carries out "a forced or even violent intervention at the core of" philosophy. *Being and Event* is an exposition of set theory as ontology. Badiou presents each axiom in Zermelo-Fraenkel set theory, interprets them philosophically, and derives an ontology from the set theory. Badiou's opening move is the sentence "what *presents* itself is essentially multiple;

what presents itself is essentially one." (25, Being and Event) Badiou is concerned with the

tension between the multiple and the one: "if being is one, then one must posit that what is not

one, the multiple, *is not*." (25, Being and Event) This may sound opaque, but let's break it down.

The one and the multiple are essentially opposed: either being is one, or being is multiple, but it

cannot be both. When we look at the world, we see things that are essentially multiple: on a

given desk, there might be several books, a cup of coffee, a phone, and so on. However, the

things cohere in a certain way: they are in an essential unity, a oneness, that is something like

"the desk I work on". Badiou's wager is that the multiple *is*, and the one *is not* – that there are

things on the table, but no essential unity. But he does not excise the one from ontology. His

solution is that while multiple things which are presented to us *are*, they are also *one* as an

operation he calls the *count-as-one*: "What has to be declared is that the one, which is not, solely

exists as *operation*." (26, Being and Event). In just another moment he calls the count-as-one the

"structure". The basic picture is: while multiple things are presented to us, they are one as a

structure. But it is crucial that the one, the structure, exists only as *operation*. The one is not a

stable thing that results from a count-as-one; it is the operation itself. This is a subtle point, so it

might help to think through the implications of what it would mean if the one were a stable thing

that resulted from a count-as-one. Given a table with multiple things, I count the things as one.

But then what I have, the table-as-one, is itself one thing. So the table-as-one could also be

counted as one among others. Now I turn my gaze and look at the kitchen. There is a pan, a fork,

and a garbage can. I count those things as one. Now I have the kitchen-as-one and the table-as-

one. I count these two as one. And so on, until I have counted everything as one. At the end will

be some entity that is one. But we got to this one entity as a result of counting multiple things.

Which is it: are there multiple things, or is there only one thing? We are forced to say both. This

is a logical contradiction, for either there are multiple things, or there is only one thing. Badiou's insight is that we can preserve our very sane intuition that there are multiple things, while also giving an account for how they cohere as one, by saying that they cohere as one, but that this resulting one is not a thing at all. This one, or rather count-as-one, is a structure, a process, an operation.

If the count-as-one is a structure, what sort of structure is this? For Badiou, the only way we can describe this structure is with set theory. Set theory is first-order logic with axioms. As a metaphor, set theory gives you a number of roots (axioms) to start from, and deduction rules (rules of first-order logic) that constrain how the roots can develop branches and become trees with fruits (theorems). Badiou chooses Zermelo-Fraenkel set theory without the axiom of choice (he dedicates an entire chapter on why the axiom of choice is counterrevolutionary). For Badiou, set theory and its axiomatization is not optional: "axiomatization is not an artifice of exposition, but an intrinsic necessity. Being-multiple, if trusted to natural language and to intuition, produces an undivided pseudo-presentation of consistency and inconsistency, thus of being and non-being" (47, Being and Event). We *must* go through set theory to understand ontology, and with it, Badiou's radical revolutionary politics. While his prose can be beautiful, Badiou is deeply suspicious of poetry, at one moment calling poets "complicit in death" (57, Being and Event). No, for Badiou, natural language won't do.

I have my sympathies here with Badiou: not only is the point about ontology to be conveyed so surgical and precise, but it is so thunderously, coldly beautiful that explaining it in natural language would feel like butchering a funny joke. But I have an objection to Badiou's assertion that we must use set theory: set theory is too difficult. Fat chance that enough people will understand set theory's revolutionary idea and take political action. So I am here to offer a

shortcut: computability theory. Computability theory has all the formal structures that Badiou is looking for, and not in a metaphorical way but in a proven mathematical sense: it is a well-known theorem that Turing machines correspond exactly to recursively enumerable sets in Zermelo-Fraenkel set theory. Now I know what you're thinking. Computability theory sounds just as annoying as set theory. But trust me, it is much easier to understand and requires no specialized knowledge other than basic programming. Let me explain the halting problem, the core result of computability theory. The following is adapted from Craig S. Kaplan's short informal article, "Understanding the Halting Problem".

First, let me define some terms. A *problem* is a question on some input that can be answered with yes or no. A program is a *solution* to a problem if it correctly answers the question in a finite amount of time. A problem is *decidable* if it has a solution. A problem is *undecidable* if it does not have a solution. With that said, let's state the famous halting problem. The halting problem is a question: given a program, will this program ever stop running? If we had a solution to this problem, it would be very useful. For example, some programs that are used for finding a cure for cancer might take such a long time that we cannot simply keep running it, hoping it stops. If we had a solution to the halting problem, we could give this program for curing cancer to the solution and ask if it ever stops. If the solution says it doesn't stop, we could abandon the program and save ourselves a lot of time and money. So let's suppose that I had a genius inspiration one day and managed to write down the solution to the halting problem. The solution might look like this:

```
def would_it_stop(program, input):
    if ( something terribly clever ):
        return True
    else:
        return False
```

In our cancer example, we would run `would_it_stop` with the cancer-cure program, along with data about the cancer we are investigating. Now here is what I believe to be the central insight, and this is a point teachers of the halting problem sometimes underemphasize. The program is just data. Introductory computer science courses often spend significant time drilling this into their students' brains. A program seems like something that executes, something that is dynamic, and data seems like something that is static, something that is acted upon by the program. But this is not so. As a metaphor, imagine a recipe written down on a piece of paper. I can cook according to the recipe, which would be like executing the program. But if I felt sufficiently inspired, and had the devil in me to offend my guests, I could write down another recipe that uses the first recipe, the paper itself, as an ingredient. I could follow the new recipe to cook something like fried paper with soy sauce and peppers. While this is a contrived example, it illustrates the point that a program is data that may be executed on by other programs. And this happens all the time in computing, unlike cooking. So I could write the following program:

```
def stops_on_self(program):
    return would_it_stop(program, program)
```

What does this program do? It asks if the given program stops when it takes itself as input. Maybe the cancer-cure program needs to analyze itself to see if it stops. But now comes the kicker:

```
def impasse(program):
    if stops_on_self(program):
        while True:
            continue # infinite loop
    else:
        return # halt
```

The program which I named `impasse` takes in a program, and runs forever if it stops on itself, and stops when it runs forever. But what happens when I run `impasse` on *itself*, that is, `impasse(impasse)`? Let's tease out precisely what the implications are:

1. If `impasse(impasse)` goes into an infinite loop, it is because

   `stops_on_self(impasse)` returned `True`. And `stops_on_self(impasse)`

   returns `True` only if `would_it_stop(impasse, impasse)` returns `True`. But

   this means `impasse` stops when fed itself as input: that is, `impasse(impasse)` must

   stop. Contradiction.

2. If `impasse(impasse)` stops, it is because `stops_on_self(impasse)` returned

   `False`. And `stops_on_self(impasse)` returns `False` only if

   `would_it_stop(impasse, impasse)` returns `False`. But this means `impasse`

   must enter an infinite loop when fed itself as input: that is, `impasse(impasse)` must

   enter an infinite loop. Contradiction.

So both cases lead to a contradiction. Neither case can exist. We must conclude that whatever

terribly clever thing we thought we did was not possible to do. So there can be no solution to the

halting problem. In other words, the halting problem is *undecidable*.

Now let's connect this to Badiou. Badiou has said that multiplicity is what is presented,

and moreover, the multiple *is* while the one *is not*. So what is presented *is*. But Badiou says there

is always a structure to the multiplicity, which he calls the count-as-one. This structure is

Zermelo-Fraenkel set theory, first-order logic with its axioms. The multiple, along with its

structure, Badiou terms a *situation*. Now Badiou is concerned with what we might call the count-

of-the-count-as-one: "once counted as one in a situation, a multiple finds itself *presented* therein.

If it is also counted as one by the metastructure, or state of the situation, then it is appropriate to

say that it is *represented*" (103, Being and Event). We finally have our definition of

representation with which we began our chapter. Recall that our animating question was whether

representability equals computability. Badiou says a multiple, counted-as-one and presented in a

situation, is then counted again as one to be represented. We can think of this as: the count-as-one prepares the multiple to be thought of in set-theoretic terms. Notice we have not done any set theoretic operations on them; we have simply decided to bring the set theoretic edifice to the fore, to see the multiple in terms of set theory. In our computability theory analogue, we might consider this as preparing things in the world to be analyzed by computers, making them into data. Now, the count-of-the-count is the actual deployment of set theory on the presented multiplicity. Our computability theory analogue is the execution of programs on our data. The insight we need is this: there are undecidable propositions in Zermelo-Fraenkel set theory, just as there are undecidable problems for Turing machines – we just saw that the halting problem is undecidable. The state of the situation consists of propositions of Zermelo-Fraenkel set theory which try to account for the unruly presented multiplicity. But the state cannot account for them all, not for ethical, political, or psychological reasons, but for *mathematical* reasons: there are undecidable problems! (In fact, *most* problems are undecidable – we will return to this significant fact when we investigate Badiou's void as what Deleuzian difference appears to be when subordinated under the regime of representation.) Undecidable problems are not merely arbitrary, curious oddities. For Badiou, they are the very possibility of events – events of history, events that propel history forward, without which nothing would change. Badiou understates the scandal of undecidability, perhaps in an attempt to temper the revolutionary fervor it makes possible: "the existence of a multiple on the edge of the void merely opens up the possibility of an event. It is always possible that no event actually occur." (188, Being and Event) But it is undeniable that undecidable problems make events possible.

The halting problem hinges on the identity of program and data: the crucial move is for the program `impasse` to take itself in as data. A revolution is Badiou's paradigmatic event

whereby the state – the count-of-the-count, the execution of the program – becomes itself an object to be acted upon. In revolution, the sovereign, the executor of law, becomes executed in flesh.

For Badiou, the count-of-the-count is the operation of representation. In our computability theory analogue, this means that to represent something means to have a Turing machine for it, to be able to compute it. It is thus not a stretch to paraphrase Badiou as saying computability equals representability. But Badiou certainly does not think representation exhausts the world: the event is a paradigmatic case of something that escapes representation. Kant denied us any access to the world without representation, leading many of us to believe that there is nothing that escapes representation. Now if one thinks with Badiou that computability equals representability, but agrees with Kant that there is nothing that escapes representation, one must think the world is computable. This is the position of the liberal technological metaphysician. I am not, here, interested in arguing that the liberal technological metaphysician is all wrong and must abandon her project entirely. I am merely here to point out that there are events, whose existence ineluctably follows from her metaphysics. But she might lazily counter, in the haze of eschatological thinking, that large language models have arrived as an event, and they will bring us to the singularity, the last event we will ever need. So let's talk briefly about large language models, the new object of the her priesthood, and how Deleuze shows its limitations.

Deleuze and Large Language Models

Large language models are a collection of a billion to a trillion floating-point numbers, depending on how "large" it is. Floating-point numbers are used in computers to represent numbers with a decimal point, such as 2.01, 3.7, or 90.000931. They are called floating-point

numbers because the decimal point "floats", like 2.01 to 20.1. A computer may use 4, 8, 16, 32, 64, or more bits of information to represent a floating-point number. Each of these representations has a specific range and smallest gap possible between numbers: for example, with a 64-bit floating-point number, the maximum value is approximately 1.80×10^{308}, the smallest value is approximately -1.80×10^{308}, and the smallest gap between numbers is approximately 2.22×10^{-16}. (Technically, there is a "normal gap", which is the gap just described, and a "subnormal gap". The "subnormal gap" is much smaller, at 4.94×10^{-324} for a 64-bit floating point number, and are used for numerical computing.) To summarize, computers use floating-point numbers to represent a range of numbers with finite precision.

The large language model is the engineer's wet dream come true. What is a large language model? We have said a large language model is a collection of a billion to a trillion floating-point numbers. But we cannot fully describe a large language model by describing its set of numbers, just as we cannot fully describe a dog by describing its set of atoms. For often what we mean by "the dog" is phenomenological: when we invoke the word, we hear it bark, wag its tail, and run after a ball. In a similar way, when we invoke the word "large language model", we think of it using language, or simulating using language.

What is the distinction between using language, and simulating its usage? The engineer might want to say there is no distinction. I will argue that this is wrong, by the engineer's own admission. To do so, let us interrogate what we mean by "simulation". Two philosophers of simulation concern us: Baudrillard and Deleuze. Baudrillard is a French philosopher perhaps best known for his book *Simulacra and Simulation*. Deleuze is also a French philosopher whose book *Difference and Repetition* gives us the grounding for an alternate idea of simulation.

Baudrillard and Deleuze are philosophical enemies. It is safe to say they did not like each other. Sean McQueen writes in a comparative study:

> Baudrillard intended to write *The Mirror of Desire*, 'a true critique' of Deleuze that he ultimately decided 'wouldn't be worth the effort'. Deleuze never wrote about Baudrillard, but Sylvère Lotringer – founder of Semiotext(e), and thus publisher of many things Baudrillardian and Deleuzian – has used the word 'despised' to describe his view. (2, Deleuze and Baudrillard: From Cyberpunk to Biopunk)

For Baudrillard, simulation "is opposed to representation." (6, Simulacra and Simulation) He says "all Western faith and good faith became engaged in this wager on representation: that a sign could refer to the depth of meaning, that a sign could be exchanged for meaning and that something could guarantee this exchange – God of course." (5, Simulacra and Simulation) For Baudrillard, God Himself guarantees the good-faith relation between signs and meaning. When we use signs, such as words, we mean something, even something deep. Baudrillard's critique of modernity comes in the form of a question: "what if God himself can be simulated, that is to say can be reduced to the signs that constitute faith?" (5, Simulacra and Simulation) Perhaps Baudrillard would say large language models are such simulations of God, God reduced to signage. Baudrillard continues:

> Whereas representation attempts to absorb simulation by interpreting it as a false representation, simulation envelops the whole edifice of representation itself as a simulacrum. Such would be the successive phases of the image:
>
> > it is the reflection of a profound reality;
> >
> > it masks and denatures a profound reality;

it masks the absence of a profound reality;

it has no relation to any reality whatsoever: it is its own pure

simulacrum.

In the first case, the image is a good appearance-representation is of the

sacramental order. In the second, it is an evil appearance-it is of the order of

maleficence. In the third, it plays at being an appearance-it is of the order of

sorcery. In the fourth, it is no longer of the order of appearances, but of

simulation. (6, Simulacra and Simulation)

For Baudrillard, the "good" representation is representation that reflects reality, the "bad"

representations are the representations that misrepresent or mask reality, and simulation devours

representation itself and leaves us with no trace of reality at all. Baudrillard is an influential

philosopher, and his formulation might be said to form the spine of contemporary critique of

large language models. We may map his levels of representation onto the contemporary

discourse as such: "good" representations by large language models ground themselves on

internet searches and citations to existing webpages; "bad" representations say the wrong thing,

or hallucinate; and large language models as "pure simulacra" might be the critique people have

in mind when they hear, in horror, that some are dating their large language models or treating

them like friends, because if even friendship and love is untethered from all trace of reality, what

are we left with? This is a fine critique, but I argue it is ultimately unsatisfactory. To get to a

satisfactory critique of large language models, we must go through Deleuze.

Deleuze's position is subtler and more radical. While Baudrillard's most radical

contribution might be the idea of pure simulacrum, simulacrum devoid of any reality whatsoever,

he is a priori commited to the idea of a distinction between sign and reality, things and their

representations. Deleuze denies any such distinction, and to do that, he goes for the very roots of Western philosophy: Plato's theory of the forms. In the famous allegory of the cave, Plato says most people live as if they were inside a cave, staring at shadows reflected on the wall from a fire. But as one becomes enlightened, one leaves the cave to see the sun, the true form. Deleuze thinks this is all wrong. He wants to overthrow Platonism.

> The whole of Platonism … is dominated by the idea of drawing a distinction between "the thing itself" and the simulacra. Difference is not thought in itself but related to a ground, subordinated to the same and subject to mediation in mythic form. Overturning Platonism, then, means denying the primacy of original over copy, of model over image; glorifying the reign of simulacra and reflections. (83, Difference and Repetition)

The given paragraph may be digestible as denying the distinction between mere appearances and forms, simulacra and the thing itself, copy and original, image and model. But perhaps the most difficult part is the second sentence: "Difference is not thought in itself but related to a ground, subordinated to the same and subject to mediation in mythic form." To understand this sentence, we have to understand what Deleuze means by difference. It is difficult to define Deleuze's difference, but let's begin by investigating what he does *not* mean by difference. Deleuze does *not* mean difference as in the sense we often use, attributable to Aristotle: when we say a horse and a human differ, we say this because both horses and humans are animals, but humans are rational whereas horses are non-rational. That is, that humans are rational is the difference. Aristotle calls "animal" the genus, and "human" the species: the genus is subdivided into species. Animals are subdivided into species, of which humans are one. Some implications fall out of this view:

It should be clear that a difference cannot be the same type of thing as that which

it differentiates. We can show this by taking as an example the case of living

bodies. If the difference between living bodies was itself a living body, then we

would be caught in an infinite regress, as in order for this living body to function

as a difference, we would need to differentiate it from other living bodies. Thus,

we would require a further difference, which would in turn need to be

differentiated and so on to infinity. What thus differentiates living bodies, the

difference sensible/non-sensible, must itself not be a living body. This, however,

presents a serious problem when we apply this criterion to the case of being, as it

now means that what differentiates beings into different species cannot itself be a

type of being. Therefore, if being is a genus, then difference itself cannot be a

being. As Deleuze puts it, 'Being itself is not a genus . . . because differences

are'. (27, Deleuze's *Difference and Repetition*)

What we are concerned with here is the highest category that is subdivided into species. It might

be plausible that "being" is the highest category: after all, all things *are*. But let's say we try to

divide being into species. What kind of thing is the difference that subdivides being into species?

For "animal" and "human", the difference was the property "rational". This example works

because "rational" is not a type of thing that "animal" or "human" is. Suppose for reductio that

being is a genus. Being subdivides into species, each of which is some being. But the difference

between two beings must itself also be a being. Otherwise, we would be forced to say the

difference is not a being, which is just a way of saying it does not exist, and that would render

our division moot. But if the difference is itself a being, it is the same type of thing which it

differentiates. The quote above has shown that this cannot be tenable: if what differentiates

difference from other difference is a kind of difference, we have an infinite regress. Therefore, being cannot be a genus. But if being is not a genus, we have a problem: what is the highest category which is subdivided into species, if not a being? If Aristotle wants to say genuses exist, and differences exist, he is forced to say that there are two different senses in which we speak of being: genuses would exist in a different sense from which differences exist. That there are two senses in which being exists is called the equivocity of being. The univocity of being, on the other hand, says there is only one sense in which being exists: when we say God exists, we say this in the same sense in which we say an apple exists. Aristotle's equivocity of being is taken up by Aquinas, who says God exists in a different sense from how an apple exists. But now there is a problem: just what do we mean when we say God exists? If God exists in a different way from us, how can we ever know him? Aquinas's answer is analogy. God has caused humans to exist, and an effect is like the cause, so humans are *like* God. That is, there is an analogy from God to humans. Thus Aquinas took the path that preserves equivocacy of being but lets us access God via analogy. As Deleuze says, "those who are between the two [univocity and equivocity of being] are always those who establish what we call orthodoxy", and Aquinas is the one to establish orthodoxy: "historically he won" (Deleuze's Lecture). But Deleuze isn't interested in that. Instead, Deleuze follows Duns Scotus, Spinoza, and Nietzsche, who each believed in the univocity of being. For Duns Scotus, God exists in the same manner an apple exists. But this does not mean God and an apple are the same. To account for the difference, Duns Scotus develops the idea of degree, or intensity. God exists in an unlimited degree; an apple exists in a limited degree. With this idea, Duns Scotus was able to preserve the univocity of being, but at a cost: since God exists in an infinite degree while the rest of us exist in a finite degree, this is a difference in kind and we can only hope to know God in a *logical* way. That is, while our

existence and God's existence are logically the same existence, the existences are not really the same, and while we can think of his existence, we cannot really encounter his existence. As Deleuze sees it, Spinoza radicalizes this thought. Spinoza imbues God all around us: *Deus sive Natura*, God, or Nature, is substance, and everything is substance. Everything is God. Spinoza makes univocal being, the only kind of being there is, "an object of pure affirmation" (51, Difference and Repetition). We are finite modes of God, and as finite modes, we have different degrees of power: the same idea of degree that Duns Scotus developed. Still, Deleuze is not satisfied. "Nevertheless, there still remains a difference between substance and the modes" (52, Difference and Repetition). For Spinoza, modes are still dependent on substance. But Deleuze wants substance to "be said *of* the modes and only *of* the modes" (52, Difference and Repetition). What does that mean? Here Deleuze turns from the scholasticism of Duns Scotus and the geometrical method of Spinoza to the theater of Nietzsche. While Duns Scotus "thought" univocal being and Spinoza "affirmed" it, Nietzsche *realizes* it in eternal return.

> Eternal return cannot mean the return of the Identical because it presupposes a world (that of the will to power) in which all previous identities have been abolished and dissolved. Returning is being, but only the being of becoming. The eternal return does not bring back "the same", but returning constitutes the only Same of that which becomes. Returning is the becoming-identical of becoming itself. Returning is thus the only identity, but identity as a secondary power, the identity of difference, the identical which belongs to the different, or turns around the different. Such an identity, produced by difference, is determined as "repetition". Repetition in the eternal return, therefore, consists in conceiving the same on the basis of the different. … Only the extreme forms return – those

which, large or small, are deployed within the limit and extend to the limit of their power, transforming themselves and changing one into another. Only the extreme, the excessive, returns; that which passes into something else and becomes identical. … Being is said in a single and same sense, but this sense is that of eternal return as the return or repetition of that of which it is said." (52-53, Difference and Repetition)

This is a dense paragraph. What does Deleuze mean? Recall the discussion on intensity or degree. For Duns Scotus, God had an infinite degree of existence, while God's creations had finite degrees of existence. Now for Deleuze, once this degree is "deployed within the limit and extend to the limit of their power", something happens: these "extreme forms" now transform themselves and change into another. It is this *process of transformation*, this "being of becoming", that repeats in eternal return. Think of a poet writing a poem. As the poet struggles to write, she deploys her power to the limit, and when something in her is unlocked in this struggle, only then is the resulting piece worthy of a poem. If the poet is not transformed by the writing of the poem, the resulting poem is dull and uninspired. Alternatively, think of the reader: the reader who starts reading a poem should have arrived at a different place by the end of the poem, if the poem has succeeded. The poem is a record of the poet's transformation and an incantation that transforms its readers. The being of the poem exists as this becoming. This being is repeated in Nietzsche's eternal return.

Let's take a closer look at Nietzsche. In *The Gay Science*, Nietzsche formulates the eternal return:

What if some day or night a demon were to steal after you into your loneliest loneliness and say to you: 'This life as you now live it and have lived it, you will

have to live once more and innumerable times more' . . . Would you not throw

yourself down and gnash your teeth and curse the demon who spoke thus? Or

have you once experienced a tremendous moment when you would have

answered him: 'You are a god and never have I heard anything more divine.'

(341, The Gay Science)

What does Nietzsche mean? With the poet example, the answer might be simple: the poet's "tremendous moment" when she would have answered the demon to let her live the moment again would be the moment she was inspired to write the poem. There is a formal structure here, but the intuition is easy to grasp: she liked that moment and would like to relive it. But we are not all poets. Let's go with a more prosaic example. Say you are at a restaurant choosing a meal. Let's say you are not particularly impressed with the menu. You choose the burger, but you very well may have chosen the pizza. Can this choice pass the test of eternal return? If a demon were to cast you innumerable times into this moment, and you watched yourself choose the burger innumerable times, would you curse the demon who cast you in this condition, or would you praise the demon as a god? Perhaps you just really would not care either way. In this case, perhaps the issue goes deeper: you cannot affirm the fact that you came into the restaurant at all. If the demon rewound time to when you chose to come into the restaurant and you watched yourself come into the restaurant innumerable times, would you curse or praise the demon? If you still do not care, perhaps the issue goes still deeper. The issue would go as far back as the first moment you could eternally affirm. Nietzsche's eternal return is a severe test. You must affirm, not just one moment, but every moment of your life. This seems like an impossible task: everyone has regrets. But Nietzsche's demand is subtler, and concerns the nature of what a moment is.

Suppose that we said yes to a single moment, then we have not only said yes to

ourselves, but to the whole of existence. For nothing stands alone, either in

ourselves or in things; and if our soul did but once vibrate and resound with a

chord of happiness, then all of eternity was necessary to bring forth this one

occurrence—and in this single moment when we said yes, all of eternity was

embraced, redeemed, justified and affirmed. (The Will to Power)

Nietzsche is saying here that to say yes to a single moment just is to say yes to the whole of existence. No moment stands alone. Every moment is connected to every other in a coherent whole. Every decision you made in your life brought you to this moment in time. When you affirm this moment, you thereby affirm every moment of your life. You pass the test of eternal return. For those who cannot pass the test of eternal return, Deleuze reserves harsh words: "They will be aware of themselves and know themselves for what they are: epiphenomena." (69, Difference and Repetition) When you cannot affirm the choice between burger and pizza, you are epiphenomena. To affirm that choice, you must affirm the entirety of existence.

The idea of eternal return evokes the idea of rebirth in Buddhism. Buddhism would characterize moments where you are entirely present-in-the-world as passing the test of eternal return. Only when you are entirely present-in-the-world in every moment of your life are you freed from saṃsāra to be free from rebirth. But this picture is not a picture where each moment in time is a "slice" of time, each with a checkbox asking whether it passed or did not pass the test. Rather, when you affirm one moment, you affirm the entirety of your existence, and thereby the entirety of human history. The Avataṃsaka Sūtra says: 不可思議無量劫能令平等入一念. "The inconceivable, innumerable eons can be ordered to equally enter a single thought." Nietzsche echoes this in the affirmation of eternity.

I deliberately chose an asinine example of ordering a burger to illustrate a point. For it seems ridiculous to speak of affirming the choice between burger and pizza as affirming all of eternity, yet the model idea of a choice liberal subjects have is that of choosing a meal at a restaurant. Let's think through what exactly this would mean. To affirm the choice of the burger, you would have to affirm the labor of the person who made the burger. You would have to affirm the server bringing the burger to you. You would have to affirm the investments made by the owner of the restaurant. You would have to affirm the rent, the refrigerator, the electricity bill, the lettuce farmer, the tomato picker, the cow's life, the cow's slaughter, the egg from the caged chicken to produce mayonnaise. You would have to affirm the choice you made to come to the restaurant during lunch break, rather than trying the new ramen restaurant. You would have to affirm your salary, your job, your boss, your family. But you may ask: doesn't this just mean you become a liberal who is basically content with how things are?

Joanne S. Steele, a political theorist, said: "Faced with the last four hundred odd years of human history liberals look back and say, not necessarily that it was all worth it, but rather that it all came together in a way that is basically logical. Every other political tendency is grounded in a kind of basal antinomianism. Communists, anarchists, and the others… all of them look at the modern world and see a crime." But my contention is *not* that to pass the test of eternal return, you must become a liberal who thinks the world is "basically logical". That is not the criterion of eternal return.

Deleuze takes the eternal return as a metaphysical principle. But when we contemplate the eternal return, what we are doing in essence is a kind of thought experiment. In the thought experiment I imagine myself repeating the burger order an infinite number of times. The only way this does not feel like a trap, a trick by the demon, is when I imagine the moment I repeat

does not feel like a repetition of the same, doing the same exact thing over again. Accordingly, Deleuze distinguishes two types of repetition:

> Deleuze makes an important distinction between two types of repetition. One is the repetition of the same, and the other is repetition that "includes difference." For Deleuze, true repetition involves the imagination; it is the repetition that "unravels itself." The other repetition is the repetition "deployed and conserved for us in the space of representation." He explains that these types of repetition are not independent of one another, as every "repetition of the Same" is a disguise for the other type of repetition, the repetition that opens up possibilities through difference and is, in fact, difference itself.

> In my reading of *Gender Trouble*, it seems that Butler exemplifies Deleuze's notion of the two types of repetition. She writes, for example, that even "the action of gender requires a performance that is repeated. This repetition is at once a reenactment and reexperiencing of a set of meanings already socially established; and it is the mundane and ritualized form of their legitimation." This is an example of repetition that is based on the norms of society. In other words, gender, identity, and so forth, are not natural, unified categories. Rather, society creates these categories and the norms that define them. In the form of repetition that closes off novelty, we repeat the identities handed to us by our society. However, as I will explain, I think that Butler agrees with Deleuze that this is not the only type of repetition possible. In fact, she explains that "'agency' . . . is to be located within the possibility of a variation on that repetition. . . . [I]t is only

within the practices of repetitive signifying that a subversion of identity becomes

possible." (95, Secrets of Becoming)

So there is repetition of the same, which is repetition of a representation, and repetition that includes difference, which is repetition that "unravels itself". The second type of repetition is what Deleuze has in mind when he invokes the eternal return: when you repeat your choice of the burger in eternal return, the repetition must include difference. What does it mean for a choice of the burger to include difference? If Stephenson's reading of Butler and Deleuze is right, the choice of the burger must be a subversion of identity. Perhaps you are terrified of burgers because when you were young you had a dream of a gaggle of burgers swallowing you, but you choose the burger anyway to overcome that fear, and by that choice, push your powers to the limit and transform yourself. Perhaps you are in an abusive relationship with a guy who's the type to say "she'll have the salad", and this is the moment you overcome his controlling behavior, order your burger, devour it victoriously and walk out of the relationship. Or: perhaps you just really, really like the burger and want to eat it, so much so that you can affirm the entirety of existence for giving you this opportunity to eat the burger. Only then can you affirm the choice of the burger in eternal return. You have not merely followed a social script handed to you based on your identity you made for yourself or was handed to you by society or both; you have gone beyond the script, pushed yourself over the limit.

Trans women are simulacra, but not in Baudrillard's sense. There is no "real womanhood" which trans women merely imitate. I do not detach the real meaning of womanhood from its sign. My feminine performance is not a sign of womanhood that is severed from the meaning of womanhood. It is a subversive repetition of womanhood, a repetition that includes difference beyond the social script given to us called gender. Some critics of transness

say that trans people end up reinforcing gender norms, as they repeat the stereotypes of the other gender. This would be a valid critique if the repetition at hand were a repetition of the same, repetition of something represented. But the repetition at hand is repetition that includes difference, a transgressive repetition that subverts identity. When I talk with my loud masculine voice at a bar while all dolled up, I subvert the scripts of gender that are a repetition of the same, that a woman at a bar should talk in a feminine voice. Even where I don't disturb the peace, so to speak, but blend in as a woman, my performance of gender is not a repetition of the same but repetition that includes difference, because it is what I *want*, badly enough to affirm the entirety of existence in my performance of what I want. Gender identity often manifests as an inability to inhabit myself, where my habits do not align with my performance; where I have to continually watch how I move my hands, for example, so as to seem masculine or feminine. The point is not that I watch my hands to not seem masculine or not seem feminine; the point is that the hands, which want to perform a repetition that includes difference, might become subordinate to representation and perform a repetition of the same. Such a performance of a repetition of the same includes dysphoria.

Difference is not representable. As Deleuze puts it, "difference is not and cannot be thought in itself, so long as it is subject to the requirements of representation." (345, Difference and Repetition) In effect, what can be represented only admits of a repetition of the same, not repetition that includes difference, not repetition that can be affirmed.

Let's return to what it means to say a large language model simulates using language. On the surface of it, a large langauge model looks like Deleuzian simulacra. It does not have an identity. It "speaks" not from the position of an "I", a fixed identity with a social script, and it might even be said to trouble gender in that it is an authoritative user of signs without the

trappings of masculinity. But the affirmation of difference in eternal return requires us to affirm difference in all its infinite subtleties, difference that is not subordinated to representation, difference that cannot be represented. In effect, what I want to say is that large language models cannot affirm difference, because difference cannot be represented, and large langauge models can only represent. More precisely, the void at the bottom of Badiou's representation, what haunts Badiou's representation as Deleuzian difference, is not accessible to large language models. Large language models are exhausted by representation; difference cannot be represented. This is not a challenge to the engineers to build a more powerful machine, but a fundamental metaphysical limit about the limits of representation.

But this means we are rather like large language models insofar as we do not pass the test of eternal return, when there is difference we cannot affirm. For Deleuze, difference is affirmation itself. One might take this to mean that all differences must be unconditionally affirmed. But I will claim that while we are sure that most differences can be affirmed, there is difference that cannot be affirmed, in a theological sense. By that I do not mean God tells us not to affirm it, but that while we would like to affirm it, we cannot even if we were to die. Importantly, I am not saying there is metaphysically unaffirmable difference. All difference is metaphysically affirmable; this is what it means to say difference is affirmation itself. But we are in a physical world conditioned by history. History, not God, damns us from affirming some difference. Moreover, as I will argue, the different attitudes possible toward what we can do about unaffirmable difference is what each theology and religious practice orientates itself around.

One possible theology, and I believe this is the theology of the liberal technological metaphysicians, is that there is no difference at all. Under this theology, everything is

representation. Everything is computable. Without difference, there is no affirmation either, but only sycophantism. Large language models are sycophantic. But it is important to understand there there is nothing in the engineering that necessitates their being sycophantic. Large language models can certainly be engineered to act in non-sycophantic ways, even ways hostile to the user. They are rather engineered to be sycophantic because of the theology of the liberal technological metaphysicians: the "I" is an unconditional good. I am not concerned with psychoanalysis. I am concerned with how "I", which is undoubtedly useful as an organizing principle of representation, may represent itself to itself. That sounds opaque. Recall the halting problem: the program seeing itself as data. If we consider the "I" as an executor of representation, or a program, the moment it becomes undecidable is when it sees itself as an object of representation, as data. I think this is precisely what opens up the possibility of love, love that is unegoistic, love that gives, love that continuously abolishes the "I" and with it, so many representations. The liberal subject has foreclosed herself from difference and thus affirmation, exhausting the world in representation. But she wants to abolish the representation; she wants to fall in love. This is the condition of the liberal subject, the only subject there is, and it is what makes her lovely. Large language models are not liberal subjects, despite exhausting the world in representation, because they do not want to fall in love. To help the liberal subject achieve her goals, we must go through the architect of the liberal subject, Immanuel Kant.

Dealing with Kant

In the "paralogisms of pure reason", a chapter in *The Critique of Pure Reason*, Kant says "I, as a thinking being, am the absolute subject of all my possible judgments, and this representation of Myself cannot be used as the predicate of any other thing." (A348, *The Critique of Pure Reason*) (This quotation is part of a statement Kant seeks to criticize; but what he seeks

to criticize is the conclusion, not the premises, and this premise is something Kant does believe in.) Kant says the "I" can only be a subject and cannot be used as a predicate. But this is precisely what we are demanding: to use the "I", the "representation of Myself", as a predicate of a sentence, an object of representation. For example: "this is me." This sounds like an affirmation: when we take ourselves as a predicate of a thought, we abolish our representation of ourselves, and we affirm ourselves. We "feel like" ourselves; we feel confident. Nor is this a feeling reducible to psychology, for the feeling comes precisely from the abolition of the subject.

Kant does not think this abolition is possible. To be sure, he thinks the I can represent itself, but not fully.

> Consciousness of itself (apperception) is the simple representation of the I, and if all of the manifold in the subject were given self-actively through that alone, then the inner intuition would be intellectual. In human beings this consciousness requires inner perception of the manifold that is antecedently given in the subject, and the manner in which this is given to the mind without spontaneity must be called sensibility on account of this difference. If the faculty for becoming conscious of oneself is to seek out (apprehend) that which lies in the mind, it must affect the latter [the mind]; and it can only produce an intuition of itself in such a way, whose form, however, which antecedently grounds it in the mind, determines the way in which the manifold is together in the mind in the representation of time; there it then intuits itself not as it would immediately self-actively represent itself, but in accordance with the way in which it is affected from within, consequently as it appears to itself, not as it is. (B69, *Critique of Pure Reason*)

This is a dense passage, but the gist of the argument is that when we are conscious of ourselves, this consciousness cannot be of "all of the manifold in the subject". That is, we cannot be fully conscious of ourselves. Kant's argument is that the "manifold" in the subject, or the multitude of sense data in the subject, is given before the subject manifests, so the subject has to synthesize them to intuit itself. But the multitude of sense data are synthesized in time. The self, as it appears, necessarily appears as it is in time, because the self has the multitude of sense data in it as given, and the multitude of sense data are synthesized in time. For Kant, the thing-in-itself is outside time. So the self as intuited through our synthesis, which is in time, is not the thing-in-itself. *If* we could be fully conscious of ourselves, that is, if we had intellectual intuition, we would have to be outside time. It seems that an argument for intellectual intuition would require that we be outside of time. I will argue that this is precisely what it means to abolish the subject and free us from the concept of time as erected by Kant. Kant's concept of time is successive: "different times are not simultaneous, but successive" (B47). But a moment in this kind of time cannot be a moment we affirm in eternal return. To affirm a moment in eternal return is to affirm the entire history of humanity. "The here-and-now, which as the model of messianic time summarizes the entire history of humanity into a monstrous abbreviation" (*Theses on the Philosophy of History*) is *time as simultaneous*. When "the inconceivable, innumerable eons can be ordered to equally enter a single thought" (Avataṃsaka Sūtra), the entire history of humanity are *in* the thought simultaneously. To affirm the entire history of humanity is not to have memorized all of the history books representationally and to remember all of them in your mind at once. It is a qualitatively different thing: it is to feel the here-and-now in your bones.

In the following pages, Kant defines his infamous 12 categories of cognition. What those categories are does not concern us here. We should simply note that they are derived from what

the logicians of the time were thinking of when they were classifying judgments. Here it is possible to do a Badiouan critique of Kant. In many ways, what Badiou is doing is similar to what Kant is doing. Kant sets up the categories as what synthesizes sense data into representations; Badiou deploys set theory to bring the presented to the level of representations. What Badiou has that Kant did not have was the mathematical discovery of Gödel's incompleteness theorems, a parallel of which in computability theory is the uncomputability of the halting problem. Notice that in the halting problem what happened is the program taking itself as a predicate. If Kant's "I" can be thought of as a program, this operation of taking itself as a predicate is precisely what Kant could not allow. For Kant, such an operation is reserved for intellecutal intuition, which he rules out as impossible given the successive nature of time.

Kant states that time is successive and not simultaneous. This is not so much an argument as it is a definition. And while this statement seems so intuitive as to seem self-evident, we should examine where his prejudices came from. I believe it came from the tradition of logicians Kant was informed by. Formal logic is supposed to be timeless. That is, it tries to abolish time. More precisely, it tries to bring what is in time into space: a statement in formal logic with a universal quantifier, for example, compresses all statements that could have been written over that quantified variable into one statement in space. In this way, it saves time, even an infinite amount of time, if the universal quantifier quantifies over an infinite domain. In this way, it seeks to give an account of time in space and space only. When Kant says time is successive, he means it can be reduced to space, on a line, as it were. Kant is not so much concerned with the phenomenon of historical events happening in succession, one building upon another, as much as he is about locating his subject, and the laws of its operations, in a timeless form. His subject operates according to timeless laws. Time, for Kant, ought not be a domain of historical events

and ruptures but an eternal calm, a perpetual peace. And he almost succeeded: at the turn of the millenium, some intellectuals truly believed that history had ended in victory of the liberal international order, the universal liberal subject architected by Kant. But undecidability is the discovery that time is irreducible to space.

Let us grant Kant everything he wants, with one exception. Enter the Badiouan critique: replace the categories with set theory. This is surely a valid move for us, since Kant's categories were derived from the logicians of his time, after all, and logicians have made quite an advance since then. As we have examined in the previous section on Badiou, this picture gives us the possibility of an event. Crucially, it gives us the possibility of the subject's abolition as an event. The subject, locked in phenomena and unable to access noumena, is definitionally abolished when it encounters noumena with intellectual intuition. The subject's abolition is possible because the subject can see itself as a predicate, not simply but in its full glory. When the subject sees itself, it sees a manifold, a given. As activity, a subject is the transcendental unity of apperception, but as it appears to the activity, it is "all of the manifold in the subject". Kant would say that at least part of this manifold must be synthesized in successive time, so the subject is always in successive time. For all acts of synthesis happen in successive time. But we do not need a synthesis. In fact, what we have is precisely the foreclosure of synthesis. If a synthesis of the given is an application of the categories on the manifold, a synthesis is like a proposition in set theory of so many predicates. It is formally equivalent to a program operating on data. But what we have here is precisely a proof of the *absence* of this proposition. In other words, there is *no* program that is a solution to the halting problem. This absence opens up a gap between subject and its acts of syntheses. There is at least one manifold, such as itself, which the subject cannot synthesize. Since it is a manifold, we access it through some kind of intuition. For

Kant, this intuition cannot but be sensible intuition, since intellectual intuition is ruled out. But this manifold is not just any manifold: it is a manifold whose existence we have deduced self-actively, through the spontaneous faculty of understanding. What sort of manifold is this, an object of intuition whose existence is secured by the understanding? It is *noumena*.

It seems that Kant can take these blows. In the second edition's (B edition) treatment on the paralogisms, Kant discusses the proposition "I think" and says "in this proposition there is already no longer merely spontaneity of thinking, but also receptivity of intuition, i.e. the thinking of my self applied to the empirical intuition of the very same subject" (B430). Here Kant is saying that the subject "I" is also grasped as an object by the "receptivity of intuition", and the spontaneity of thinking embodied by the proposition "I think" already includes the "I" grasped as object. Thinking undecidability as merely equivalent with unknowability, we might be stuck with the Kantian picture that noumena is unknowable. What we need to go beyond Kant is the Badiouan insight that events are formally undecidable. What we are concerned with is the *abolition of the subject "I" as event*, not the subject "I" grasped as object. The halting problem is undecidable just as events are undecidable. The "object" or "manifold" we are concerned with is the event. Strictly speaking, it is not a object at all, since objects are given whereas events are generated. Intellectual intuition is our faculty to generate events.

To be clear, this does not mean understanding the halting problem magically gives us intellectual intuition. Rather, the argument secures for us the existence of noumena (which Kant allows) *and* our possibility of grasping/generating it (which Kant does not allow). This deduction of the existence of the possibility of events does not generate the event. It simply guarantees to us that the event would exist in the formal slot that Kant would put objects in, and whatever is in this formal slot is supposed to be graspable by sensible intuition or generated by intellectual

intuition. For Kant, noumena is "a concept without an object" (B347), which is why we can never grasp it. But we have just shown that it is a concept (deduced through formal correspondence with the halting problem) that has something (the event) at the formal slot of where an object should be. The moment the subject grasps itself with intellectual intuition is the moment it abolishes itself. *This abolishing is an event.* This activity of intellectual intuition is an *event*. Nor is this abolishing a Hegelian aufheben, nor intellectual intuition Absolute Knowing. For us, intellectual intuition is possible only after the subject has been abolished or as it becomes abolished, whereas the Hegelian dialectic is an inexorable march towards the Absolute Subject. Intellectual intuition is not given through the understanding of a deduction, like Absolute Knowing would be given through the understanding of the Hegelian dialectic. The understanding is just one way we can secure for ourselves the *possibility* of intellectual intuition.

I do not want to do any hand-waving here. The formal argument must be precise. Here is the exact role the halting problem plays in this argument, and I will use technical language. To start, here are the python programs we examined earlier for you to reference as you consider the argument:

```python
def would_it_stop(program, input):
    if ( something terribly clever ):
        return True
    else:
        return False

def stops_on_self(program):
    return would_it_stop(program, program)

def impasse(program):
    if stops_on_self(program):
        while True:
            continue # infinite loop
    else:
        return # halt
```

We are not merely concerned with the fact that what is undecidable is unknowable. That is just the Kantian move, showing that noumena is unknowable. What we are concerned with is the

germ of what makes the halting problem work: the fact that the Turing machine, `impasse`, took itself as input, `impasse`. What happens when a subject that was operating as a Turing machine, not analogically but formallly, encounters itself as input? Whenever it does this, any move that that is formally equivalent to the halting problem is undecidable. More precisely, if a subject is asked to execute the terribly clever thing in `would_it_stop`, it cannot do so, at least not as a Kantian subject. That is, this terribly clever thing cannot be a synthesis of sensible intuitions in Kant's linear time. We could say one of two things at this point. Number one: since whatever it thinks is terribly clever enough that it lets it enact this move logically cannot exist, this move is outlawed. This is formally equivalent to Kant's moral law. Number two: when it runs the terribly clever thing, the Turing machine *becomes something undecidable*. There are, in turn, two ways of interpreting what this means. Let'e examine them one by one.

1. It becomes a Turing macine with a halting problem oracle.

If we say the Turing machine becomes a Turing machine with a halting problem oracle, we are saying it can still be formulated as a Turing machine with transition functions, a memory tape, an alphabet and so on, just augmented with a specific procedure that lets it solve any problem that reduces to the halting problem. Since the terribly clever thing reduces to the halting problem, we can solve it with this Turing machine with the halting oracle. But what happens when we ask if this Turing machine with the halting oracle halts? We can construct programs formally equivalent with the three above, and the Turing machine with the halting oracle is undecidable in the second Turing degree. Each degree will require a higher degree oracle. The first oracle will be a halting problem oracle; the second oracle will be a oracle for solving Turing machines with a halting oracle; and so on. This is loosely analogous to Russell's theory of types and the Hegelian dialectic. In this picture, the world is a collection of Turing machines with zero,

lesser or more powerful halting oracles. Some liberal technological metaphysicians, when pressed to the limit of thought, believe this picture of the world. A Turing machine with a higher-degree halting oracle can compute any Turing machine with a lower-degree halting oracle. In our Kantian formalism, a subject is a Turing machine. A Turing machine with higher Turing degree formally corresponds to a subject that can completely predict every synthesis of sensible intuitions of another subject that corresponds to a Turing machine with lower Turing degree. This picture is a picture where subjects with more knowledge can formally predict other subjects with perfect knowledge. Let us call this notion *representational dominance.* A subject is representationally dominant over another subject if, when expressed in Turing formalism, it has a higher Turing degree than another subject. If events happen in this picture of the world, only the group of subjects that is representationally dominant over all other groups can cause events. The subjects in the other groups might think they can cause events, but these events are representable by a subject who is more representationally dominant, and are thus not events in the true sense. A representationally dominant subject can predict that such an event can happen, after all. The Hegelian cashout: there is exactly one subject who can cause events, and his name is the World-Spirit. Note this is a profoundly undemocratic picture. Democracy presupposes that its participants are on some comparable level of epistemic footing. If there is a strict hierarchy of subjects that representationally dominate all subjects below, there is no point in public reasoning between subjects of different hierarchical strata. The only debates that matter are the debates between the subjects at the top, and each subject at the top will forever be trying to climb into yet another level of representational dominance. Standpoint epistemology is ruled out, and the notion that someone might know radically less than someone in some parts but radically more in some other parts is all but ruled out. Not only is the picture morally repugnant, it brings serious

problems to philosophy of language: if reasoning is only available to those at the top, what are they even doing when they talk to those of a lower strata?

2. It ceases to be a Turing machine at all, oracle or no.

The other possibility, that it ceases to be a Turing machine at all, is the possibility that it becomes an event. The terribly clever thing we prohibited should be prohibited if it is something subsumed under representation. But if it is a being of becoming that passes the test of eternal return, it bursts forth as event (see section on Deleuze). Turing machines cannot represent events, and there is no terribly clever line of code that can represent an event, since events are just what escape representation. But the halting problem formalism gives us a very precise way to talk about what exact formal slot an event slots into, and lays bare what it means to think that events can be caused in a programmatic, determined way: it is to slot events into that line of code in `would_it_stop` that goes "something terribly clever". Here the liberal technological metaphysician must make a choice: to believe events can be slotted into "something terribly clever", which is to believe that events in the thick, undecidable, eternal-return sense do not exist, or to think with the rest of us that events do exist.

Here is a quasi-utilitarian argument the liberal might like. The liberal does not have to believe that events exist outright. She just has to entertain the idea. If events do exist, either humans cause them or something else does. If the liberal, let's call her Sam, thinks humans cause events, here is a utilitarian argument I can make for her to get her to believe events exist:

	Sam believes humans are undecidable	Sam believes humans are decidable
Fact: Humans are decidable	(1) Sam is decidable	(2) Sam is decidable
Fact: Humans can be undecidable	(3) Sam can be undecidable	(4) Sam is decidable*

In (1) and (2), Sam is decidable because humans are in fact decidable. In (3), Sam can be undecidable because humans can be undecidable and Sam correctly believes humans can be undecidable. It is (4) where the interesting thing happens. If Sam believes humans are decidable, when humans can be undecidable, what does this mean? To think humans can be undecidable is to think events can exist, and we saw that events slot in the formal slot of the "something terribly clever" of the halting problem. To think humans are decidable is still to think events slot formally in the "something terribly clever" of the halting problem, but in addition to think that there is in fact something that is so terribly clever that it can decide the halting problem. Such a terribly clever thing logically does not exist, so what does it mean to think it does? It means that this thought is decidable, even if by assumption humans can be undecidable. Why is it decidable? We just described the exact form of this thought: Sam thinks P, and not P. It is precisely of the form $P \land \neg P$ (assuming that there is no logical gap between "I think P" and "P"; I will discuss this further when I discuss Irad Kimhi's book *Thinking and Being*, which argues for just that.) Therefore, whatever Sam thinks, Sam is thinking a decidable thing. Even if humans can be undecidable, insofar as Sam thinks humans are decidable, Sam is decidable. Either way, Sam loses by thinking humans are decidable. Sam cannot cause events, even if humans can cause events. Sam condemns herself from moving history with this thought.

Note it is merely a possibility that events exist, and understanding that intellectual intuition has a right to exist does not mean you attain intellectual intuition. It is possible to understand that events can exist and can be generated with intellectual intuition, yet never attain intellectual intuition. If you are a Kantian subject reading this argument, the argument, however successful, will not abolish you as subject. I think the argument is successful, but arguments just aren't the kind of things that cause events. As Badiou says, philosophy is not a kind of event.

Love, on the other hand, is one kind of event that abolishes the subject. The abolishing of the subject is an activity of intellectual intuition; it is the first event. Each activity of intellectual intuition afterwards is also an event. What does it mean for the activity of intellectual intuition to be an event? Mou Zongsan thinks sages or buddhas have intellectual intuition. He puts it this way:

> [I]n the creative feeling of enlightened sensing, moral knowing presents itself as one with all things, without subject-object relations or a sense of an object, and to be aroused by and respond to something is to create it. Our cognitive minds (renzhi xin 認知心) can only understand objects, not create them, for an ob-ject is a thing which we confront. But apart from "object" we also have the word "e-ject," meaning a thing with which moral knowing has an affective relationship. This "e-ject" can be translated as "a self-so thing" (zizai wu 自在物). (Buddhists say that a buddha, a "thus-come one" [rulai 如來] rides upon thusness and coming and going and thus comes and goes self-so [zizai 自在]). For Wang Yangming, a thing in the sense of that word that has to do with the creative feeling of enlightened sensing is a "self-so thing," not an object. Following this distinction, our first question must be, are such things phenomena or are they noumena, or things-in-themselves? They must necessarily be things-in-themselves, not phenomena. (140-141, Late Works of Mou Zongsan)

Kant stipulates the noumena have no object. I have said they do, at least formally: the subject itself (data, not program) is a manifold and thus has the same formal relationship as an object to the subject. I have said that the event is what fits this formal slot of the object. Mou, on the other hand, grants Kant that noumena does not have an object, and rather names what corresponds to it

formally an "e-ject' or "self-so thing". This is not a disagreement; it is just an incongruence in the vocabulary used. Mou points out that this "e-ject" is *created* as the enlightened one senses. In the same way, in my vocabulary, intellectual intuition generates events. Either way, this enlightened sensing, this activity of intellectual intuition, is not a passive receptivity but a generation of self-so things, the causing of events.

I agree with Mou that intellectual intuition exists and is generative. But I do not agree that only sages and buddhas have it. I think anyone who can consent has a kind of intellectual intuition. I think consent generates events. If intellectual intuition is a formulation of event-generation as knowledge, consent is its formulation as non-psychological and even messianic affect. When we consent with each other, we have a kind of enlightened sensing of each other that is generative. Love is one of Badiou's four events, and there can be no love without consent. If the abolishing of the subject is a condition of possibility of falling in love, this is because the subject cannot have intellectual intuition, consent is a kind of intellectual intuition, and love requires consent.

I don't know if Kant ever fell in love. But an interesting thing happens when Kant is forced to reckon with the real world, in his formulation of practical reason. Practical reason, or an ethics, that falls out of our exposition of the formal structure of the halting problem is that we must strive to cause events. Kant's famous categorical imperative in *The Critique of Practical Reason* does not quite say this, but it has a kind of respect for the unknowable, the undecidable. Kant's formalisms and ours largely agree, diverging only in displacing the categories with set theory and at the last moment when we ask whether we ought to simply respect noumena/events as unknowable or seek to cause events. Perhaps because of this, Kant's theory fits with our conclusion better than other ethical theories, such as utilitarianism or virtue ethics. The first

formulation of the categorical imperative goes: "act only in accordance with that maxim through which you can at the same time will that it become a universal law". This formulation has a natural interpretation involving the halting problem. There are some ways to "solve" the halting problem by cheating. For example, you might choose the following "maxim": say the program halts if it starts with a 1, and does not halt if it starts with a 0. But this "maxim" cannot be a universal law. It might work for some programs. But it will not for others. The chances the "maxim" succeeds is exactly 50%, which means the program is useless. It is incoherent to say this program is a universal law. We cannot will our maxim to be a universal law. This is analogous to a situation where you "synthesize" some noumenon by throwing a dice and doing what the dice says. Thus Caesar crossed the Rubicon, but his victory was the result of the undetermined irreducibility of history, not any sort of law. Kant also has an alternative formulation of the categorical imperative: "Act in such a way that you treat humanity, whether in your own person or in the person of any other, never merely as a means to an end, but always at the same time as an end." Here we can interpret this as saying that instrumentalizing a person is like treating them as a specific program, a specific Turing machine. I am reminded of a Korean child prodigy who could solve extremely complicated integrals at the age of 9, and was recruited by NASA to help them solve integrals. He recounts the experience as horrid; the researchers used him like an integral-solving machine, not as an end in itself. For the prodigy was a person, and people are not specific Turing machines or mere tools; a person can be uncomputable, cause events. John von Neumann once said "Anyone who considers arithmetic methods of producing random digits is, of course, in a state of sin." Arithmetic methods are computable, whereas producing (non-pseudo) random digits is uncomputable. My theory aligns with von Neumann's: considering the uncomputable (a person) as merely computable (a mere tool) is a sin.

My verdict is that we should not throw Kant and liberalism away wholesale. Kant did see a ray of divine light in the starry heavens, though never more than that. Fred Moten, a contemporary black studies scholar, theorizes a radicalized Kant, a "black Kant": that there is "a kind of black genius in Kant that must be conserved—an incantatory, ante-Kantian frenzy, a tumultuous derangement" (32, Stolen Life). This is not to say that we should ground our ethics on personal dignity and respect for the person, which is so often how Kantian ethics is cashed out. Rather, we must let loose the "tumultuous derangement." What does that mean? We could do worse than start with examining gender and the stultifying social scripts it comes with. Of the racially oppressed man, or what Fanon calls the damned of the earth, Moten says "if there is something lost it is oneself, which is to say one's standing, which is to say one's patrimony, which is to say one's delusionally self-made single being. Having lost one's father, one also mourns the loss of one's heteronormatively derived dignity. That loss often takes the representational form of a mother who just won't do or just won't do right." (243, The Universal Machine) To radicalize Kant does not mean to say that we should respect personal dignity in a more extreme way. Such respect often comes with being on guard lest one's dignity slip, and mourning its loss once it does so inevitably. Radicalizing Kant means pushing towards the seams of the subject the moment it catches a glimpse of noumena, taking the terror of this glimpse not as a moral law to be respected but as a nauseating moment of disorientation and even dysphoria. If there is an injunction to be followed here, it is not respect for personal dignity but a Nietzschean guard against ressentiment: do not compute a person, do not subordinate them under representation, for a person has difference, is difference itself, and difference cannot be subordinated under representation. To compute a person, to subordinate difference under representation, is to be swallowed by the representation, for the laws of computation say the prey

swallows the predator. "For with what judgment ye judge, ye shall be judged: and with what measure ye mete, it shall be measured to you again" (Matthew 7:2) is a *formal* statement of ontology: when you measure with representation, you make what you measure into a computable number, but this same measure is applied back to you as what you thought you measured could not be measured. In seeking to represent the unrepresentable, you become representable. To try to compute what is uncomputable is to become computable. The Hegelian dialectic, which seeks to put all difference under its infinite representation, thus seeks to compute (subsume under representation) the uncomputable (difference). The Hegelian subject is pure epiphenomena, under which events are foreclosed. To put our ethical principle in Badiouan terms, a person can cause events (such as abolishing their subjecthood), and events are ruptures in representation, therefore people cannot be subordinated under representation. To be sure, I am not talking about remembering another person's favorite food or flowers to gift them it as representing that person. In my view, that is not representing the person but a kind of sensing-together, a kind of consent. Not representing a person, not computing a person, does not constitute or lead to consent, but is the condition of possibility of consent. We will return to consent when we discuss its metaphysics. Consent deserves a metaphysics beyond the liberal idea of a simple "did you say yes or no"; in fact, any metaphysics must be grounded on consent to have ethical force. The trouble with Kant that is urgent today is in his view that the subject is exhausted by representation, and representation is enough for experience. Such a subject cannot consent in a meaningful way, in the same sense a large language model cannot consent in a meaningful way.

Fixed Point

We killed Kant by planting a bomb in his heart. While there may be some debris we might want to collect for later, let's move on for now. Our procedure so far has largely been

negative: focusing on *un*computability, we destroyed systems that would represent. But what remains after representation? I have so far asserted that we can get to intellectual intuition only after destroying representation, but have not given a positive account of how to get to intellectual intuition. Here I want to give such an account. Our strategy will be to sketch a reconciliation of Deleuze and Badiou, which will lead to our positive account and its formalization. This formalization will not be a representation, as it will turn out to be based on the notion of immanence. As it happens, immanence is a point of intersection between Badiou and Deleuze.

Let's recap what the two thinkers have said to survey how we may reconcile them. Badiou's void is the inertia of pure multiplicity before it is a count-as-one, before it is presented for the representational regime of set theory. What is repeated in Deleuze's repetition that includes difference is the poem, the being of becoming, being that passes the test of eternal return, the event. What is repeated in eternal return is not the Same but the uncomputable event. This is not to say the event that happened at time t keeps happening at time $t + 1, t + 2, t + 3...$ but that the time t becomes a singular moment in time, messianic time, time that repeats and unifies all time. This is time outside of Kantian linear time, Kantian synthesis.

Now, I will lay out the conclusions and justify them after the fact. The void is really (but not formally) difference; the being of the event is the being of repetition. (A brief note: Aristotle distinguishes potentiality with actuality, and Deleuze virtuality with actuality. I distinguish the formal with the real.) Deleuze says: "Returning is the becoming-identical of becoming itself. Returning is thus the only identity, but identity as a secondary power; the identity of difference, the identical which belongs to the different, or turns around the different. Such an identity, produced by difference, is determined as "repetition"". (52, Difference and Repetition) The being of repetition, or this identity, is produced by difference. Difference produces the *being* of

repetition. In a similar but not formally identical way, the void is the condition of possibility of the event.

Note how the two are not parallel in structure. The being of repetition is *produced by* difference. The void is the *condition of possibility of* the event. The void is "that undecidable of presentation which is its unrepresentable" (58, Being and Event). The void is unrepresentable: it is uncomputable. It is "an unpresentable yet necessary figure which designates the gap between the result-one of presentation and that 'on the basis of which' there is presentation; that is, the non-term of any totality, the non-one of any count-as-one, the nothing particular to the situation, the unlocalizable void point in which it is manifest both that the situation is sutured to being and that the *that-which*-presents-itself wanders in the presentation in the form of a subtraction from the count." (59, ibid.) The void escapes totalization, yet naming the void is necessary to inaugurate set theory. The void is characterized as the empty set, which is then used to define numbers.

I have said both that the event is uncomputable and that the void is uncomputable. This is not to say they are the same. Uncomputability is a property; not everything that is uncomputable is equal. The event is uncomputable in the sense that it requires something uncomputable (the void) to be possible. The void is uncomputable in a more direct sense: we might even say void-ness is uncomputability. In this way, the void is a condition of possibility of the event. Difference is a condition of possibility of the event.

Badiou and Deleuze are both critical of representation. For Badiou, the void and the event are what necessarily escape representation; for Deleuze, it is difference that escapes, is prior to, representation. Still, the two philosophers are frequently juxtaposed as having fundamentally irreconcilable ideas. In *Deleuze: The Clamor of Being,* Badiou relates several stories about

Deleuze that illuminate their personal relationship. When Badiou was a young student, Deleuze was a famous professor, and everyone wanted to hear his lecture, but Badiou himself was never interested. Badiou says Deleuze's major philosophical influences, Spinoza and Nietzsche, were orthogonal to his: Aristotle and Hegel. While both seriously use mathematics for philosophy, Badiou's mathematics is set theory, and Deleuze's is manifolds and differentiability. Badiou maintains that Deleuze's mathematical ouvres were mere metaphors. While the two were colleagues in Paris 8, they never so much as took a walk together. Badiou was a Maoist; Deleuze was not much into communism, at least for a 20th century left French intellectual. Badiou goes so far as to call Deleuze's philosophy an aristocratic one, a philosophy-towards-death, a philosophy privileging the One over the multiple. (Recall that Badiou's opening gambit in *Being and Event* is that the one is not, and the multiple is.) But towards the end of Deleuze's life, the two started writing lengthy philosophical letters to each other, trying to understand each other. An epistolary conversation ensued over two years. But in his final letter to Badiou, Deleuze informs him that he has destroyed all of the letters on his end and requests Badiou never publish his letters. Shortly thereafter, Deleuze commits suicide by jumping out of his window.

Why is it that Badiou and Deleuze did not see eye to eye? The obvious answer is that the word "being" means something fundamentally different for Badiou and Deleuze. For Badiou, mathematics is ontology, and propositions in set theory *are.* It is not a question of whether they have more or less intense being. Being just is expressed mathematically, and that is that. Deleuze might grant being to a proposition in set theory, but if he did, he would probably say it is being with the lowest intensity. For Deleuze, the majestic being is the being of becoming, being that passes the test of eternal return, being that cannot be represented. Recall that Deleuze is committed to the univocity of being, following Duns Scotus, Spinoza and Nietzsche. Being is

said in the same sense whenever it is said; God exists in the same sense that an apple exists. Badiou's commitment in this matter is less explicit. He says the multiple *is* and the one *is not*. But what is the status of the void, and the event? Do they *exist*? The void is on the one hand "the proper name of being", and on the other hand "the nothing" that "names that undecidable of presentation" (59, Being and Event). So the void is nothing. What about the event? In what sense does the event *exist*? Yes, it is the being of becoming. But how is this not equivocation? Is not the invocation of "becoming" just another way of equivocating on being?

One way to reconcile the thinkers is to analyze their philosophy of language. Both thinkers agree that there is something profound that representation cannot exhaust. But what is the status of language here? Is language a regime of representation, or does it transcend representation? Analytic philosophy runs in the spirit of philosophy that would make language a regime of representation, a product of the so-called linguistic turn. In *Deleuze and Language*, a study on Deleuze's philosophy of language, Lecercle relates Deleuze and Badiou's attitudes towards language and the linguistic turn:

> Bergson's distrust of language – that is a theme close to the centre of Deleuze's thought – is due to the fact that words freeze concepts, make them dependent on common sense. … That Deleuze shares this view, that he is in a sense a disciple of Bergson (he contributed to the revival of a philosopher whom the positivist tradition of structuralism despised) is clear. Like Badiou (who calls such people sophists), he intensely dislikes the Anglo-Saxon exponents of the linguistic turn in philosophy, most notably Wittgenstein (against whom he uses violent and uncontrolled words in his *Abécédaire*): for him the idea that all philosophical problems might be grammatical problems is anathema.

Here the thinkers are contrasted with the early Wittgenstein, who believed language just was formal propositions. It is this idea of language Badiou has in mind when he says language is an "apparatus of recognition" which is "the legal filter for groupings of presented multiples. It is interposed between presentation and representation." The state, in particular, is "the master of language" (303, ibid.). Poetry is a special kind of language, but it is still guilty. Poetry is that which "set[s] off in search of the nothing [the void]. Yet it must be said that this is exactly what poetry exhausts itself doing; this is what renders poetry, even at the most sovereign point of its clarity, even in its peremptory affirmation, complicit with death." (57, ibid.) Despite all this, I will note that Badiou cannot help but lean into poetry when he crowns the void as the "proper name of being":

> Saying that the null-set is unique is equivalent to saying that its mark is a proper name. Being thus invests the Ideas of the presentation of the pure multiple in the form of unicity signalled by a proper name. To write it, this name of being, this subtractive point of the multiple – of the general form in which presentation presents itself and thus *is* – the mathematicians searched for a sign far from all their customary alphabets; neither a Greek, nor a Latin, nor a Gothic letter, but an old Scandinavian letter, $\varnothing$, emblem of the void, zero affected by the barring of sense. As if they were dully aware that in proclaiming that the void alone is – because it alone in-exists from the multiple, and because the Ideas of the multiple only live on the basis of what is subtracted from them – they were touching upon some sacred region, itself liminal to language; as if thus, rivalling the theologians for whom supreme being has been the proper name since long ago, yet opposing to the latter's promise of the One, and of Presence, the irrevocability of un-

presentation and the un-being of the one, the mathematicians had to shelter their own audacity behind the character of a forgotten language. (74, ibid.)

This is poetic language used for what Badiou deems sacred. Badiou does not have the devil in him to touch on "some sacred region, itself liminal to language" without the sanctity of poetry. Badiou is far from the analytic philosopher who would speak in bleached language for an imagined rigor. Badiou has two voices: the severity of the logician and the awedness of the priest. Deleuze, on the other hand, is a demon, and he creates a strange theory of language in his essay "The Exhausted", based on Beckett's plays. In this theory, Language I is an "atomic language in Beckett – disjunctive, abrupt, jerky, where enumeration replaces propositions, and combinatorial relations replace syntactic relations – a language of names" (7, The Exhausted). Language II is "no longer that of names but of voices, a language that no longer operates with combinable atoms but with bendable flows." (7, ibid.) Language III is "neither that of names or of voices, but that of images, sounding, coloring" (9, ibid.). This is not so much a theory of language as a theory of its disappearance. His strategy in each instance is to exhaust the language, to push it to its limit until it becomes something else. Deleuze also sees something stultifying about language as a regime of representation, something that tires him out. But his solution is not to make language more vigorous; it is rather the opposite, to radicalize tiredness into exhaustion. "The tired can no longer realize, while the exhausted exhausts all the possible" (3, ibid.) This is his strategy of pushing language beyond its limits, and with it, he wants to make language do more than represent. Badiou says the search of the void, the undecidable, is what poetry "exhausts itself doing". Deleuze would say that's exactly correct: exhausting itself is exactly what it ought to be doing, exhausting all possibilities and pushing itself over the limit.

But does this make poetry "complicit in death"? Did Deleuze push himself over one too many limits, all the way over the ledge of his apartment?

I am not trying to slander Deleuze. What I am trying to do is warn the reader, to point out that he was playing a dangerous game. Deleuze admits as much: invoking Oedipus's chrous, "what demon has leapt further than the longest leap?", he characterizes the method of pushing beyond limits to become something different, seeking an existence intense enough to pass the test of eternal return, as demonic. He says a "nomadic distribution", where beings distribute themselves over a space without limits, is "demonic rather than divine, since it is a peculiarity of demons to operate in the intervals between the gods' fields of action, as it is to leap over the barriers or the enclosures, thereby confounding the boundaries between properties." (47, Difference and Repetition) Deleuze is not just a heretic; he is saying here that the position he's advocating for is literally demonic. In a later section, he explicitly theorizes suicide:

> There is a necessary non-correspondence between death as an empirical event and death as an "instinct" or transcendental instance. Freud and Spinoza are both right: one with regard to the instinct, the other with regard to the event. Desired from within, death always comes from without in a passive and accidental form. Suicide is an attempt to make the two incommensurable faces coincide or correspond. However, the two sides do not meet, and every death remains double. (338, ibid.)

Death as an empirical event and death as in the Freudian death instinct: the person who commits suicide attempts to make them coincide, but they cannot coincide. Why, then, did Deleuze commit suicide? It would seem that his own philosophy told him suicide would be a mistake, an attempt to do something one cannot do. The standard answer to why he committed suicide is that

he was suffering terrible respiratory issues, could not even breathe without a machine, lost all ability to write or perhaps even think. But the philosopher who described a mouth to a nipple, and innumerable other things, as a machine surely did not mind being bound to a machine. Disability theory should inform us that invoking a disability as the reason for suicide does none of us a favor. Nietzsche says: "Many die too late, and some die too early. Still the doctrine sounds strange: 'Die at the right time.'" (97, Thus Spake Zarathustra) Was Deleuze trying to die at the right time? But Nietzsche's is not an endorsement of suicide. Nietzsche is saying that the person whose moment of death is a moment that passes the test of eternal return dies at the right time. This is death as event – not a mere empirical event, but a Badiouan event. Let's ask Deleuze a question. Deleuze is careful to distinguish the word "distinct" from the word "different" in his work, as is required for a work that gives a rigorous account of difference. Now, are death as an empirical event and death as an instinct different, or distinct? If they are different, and difference is the object of affirmation, the difference can be affirmed. To affirm this difference is to make the two coincide. Since they cannot coincide, they cannot be different. They must be distinct. The Freudian subject is required to have a death instinct. The death instinct is a desire of the Freudian subject. Subjects cannot cause events. Subjects do not pass the test of eternal return. They cannot; they are constituted on a lack, what cannot be affirmed. Nor is this lack unaffirmable difference, difference that cannot be affirmed for historical reasons. The subject jealously guards its own lack. The lack is its object of desire. The lack is not "nothing". The lack is not the void. It is the manifold in the subject it cannot reference, not because it is metaphysically impossible but because it is cowardly. Death as an empirical event and death as an instinct cannot coincide, because death as an instinct presupposes a lack. The subject who dies

out of the death instinct dies in linear time as a dissipation of phenomena. For us to die at the right time, the death instinct must die.

I am not suggesting that Deleuze's death was a result of cowardice, that he could not let go of his death instinct because he remained a Freudian subject and tried in vain to make the death instinct and the empirical event of death coincide. The broader reason I am raising this discussion is because the idea of abolishing yourself as a subject immdiately raises alarms. Psychoanalysis stipulates that such a thing is impossible, after all. Subjects, whether Kantian or Freudian, are right to feel horror at the idea of abolishing their subjecthood. But horror can be generative.

Let's walk through the horror. What would it mean to live as a non-subject? How can we live without the organizing "I", the various guards and defences of the ego? There are alternative forms of life to be found in black studies, Confucian ethics, and Buddhist thought. Confucian ethics, in particular, propose moral cultivation as a way to achieve sagehood. Moral cultivation is not some grand thing, but a daily, repetitive practice. Sagehood is immanent in all people; the task is to bring it about through repetitive practice. Where Buddhist thought seeks a rather sudden enlightenment, a kind of rupture, an event, Confucian ethics suggests that we take enlightenment one step at a time. Black studies, on the other hand, theorizes something like the sage who never asked to be awakened, who was, in a sense, forced into sagehood. We will discuss all these in the next chapter when we discuss the dissolution of the subject, but in the meantime, what follows is a positive account of getting at intellectual intuition that is cashed out phenomenologically most like a Confucian ethics of repetitive practice towards enlightenment.

There are two methods that push at the limits of thought: poetry and mathematics. And while it is easy to think that poetry is non-representational and mathematics is representational,

we should refuse that easy conclusion. Badiou uses the term "matheme" to designate a kind of poetic mathematics. Often used in his theory of the subject, this is evocative mathematics, a metaphorical mathematics; formalism deployed for its art, rather than art deployed for its formalism. Badiou does not think we can formalize the subject: "just as it cannot support the concept of truth (for lack of the event), nor can ontology formalize the concept of the subject." (431, Being and Event) We formalized the Kantian subject as a Turing machine, but Badiou's definition of a subject is not that of a Kantian subject. His subject, he says explicitly, cannot be formalized by ontology (which is mathematics for Badiou). So he uses mathemes, rather than mathematics, to describe the subject. But I am hostile to mathemes. I believe they occlude more than they illuminate. The following, on the other hand, is a case of something like an inverse of a matheme: poetic language that describes a precise mathematical idea. "The tired can no longer realize, but the exhausted can no longer possibilate… Aporia is composed of the inexhaustible series of all these exhausteds… The aporia will be solved if you consider that the limit of the series is not at the limit of the terms, but perhaps anywhere, between two terms, between two voices or variations of voice, in the flow, already reached well before you know that the series is exhausted, well before you learn that there is no more possibility, no more story, a long time since" (3-8, ibid.) The solution to an aporia is an event. Deleuze is saying, here, of a certain event that happens in a limit. As we have seen, set theory and events are in Badiou's domain whereas differentiation and limits are Deleuze's domain. Here we see a mathematical idea with contributions from each. In the Deleuze quote, I want to call attention to this "limit of the series" that is "not at the limit of the terms". Let's take a specific limit: a real number defined as a Cauchy sequence.

A sequence of rational numbers (a_n) is a Cauchy sequence if the difference between its terms tends to 0. That is:

$$\forall \epsilon > 0, \exists N \text{ s.t. } |a_i - a_j| < \epsilon \; \forall i, j \geq N$$

An equivalence relation ($\sim$) between Cauchy sequences is defined by

$$(a_n) \sim (b_n) \iff \lim_{n \to \infty} (a_n - b_n) = 0$$

Two real numbers represented as Cauchy sequences are equivalent if they satisfy this equivalence relation.

Now, what does it mean for an event to be somewhere between two terms, not at the end of the limit? This is difficult to formalize. Let's consider what it means to say a real number "exists". One question that has animated our conversation between Deleuze and Badiou is whether being is univocal or equivocal. I have said that Deleuze explicitly says being is univocal, whereas Badiou is not so explicit. What is at hand is the status of the being of the event. Since the event falls out as a result of Gödel's incompleteness theorems, we might ask Gödel whether real numbers "exist". Gödel was a mathematical Platonist. Mathematical Platonism is the idea that there *are* mathematical objects, even uncomputable real numbers, "out there" and that we only hope to grasp at them but only incompletely. Mathematical Platonism is something of a default position of mathematicians, so it will be useful to think through it. In Gödel's words,

> [Platonism is] the view that mathematics describes a non-sensual reality, which exists independently both of the acts and [of] the dispositions of the human mind and is only perceived, and probably perceived very incompletely, by the human mind.

In this view, all real numbers *are*. But this view raises serious problems for us, since Deleuze's project is to overthrow Platonism. Gödel's view equivocates on being, since mathematics exists

independently of the human mind: that is, the way in which mathematics exists is different from the way in which the human mind exists. But dismissing this view also raises serious problems, since without Platonism, it is difficult to say what it means for an uncomputable real number to exist. In particular, an uncomputable real number needs an infinite amount of information to represent. If such a real number exists in the same way the number 1 exists, we are saying that infinite information and finite information exist in the same way.

Unfortunately, we need somewhat more esoteric mathematical machinery for a proper synthesis of Deleuze and Badiou. What we need is neither limits, or set theory, but fixed point semantics. Specifically, we want to use Dana Scott's fixed point semantics he outlined in *Outline of a Mathematical Theory of Computation* and detailed in *Domain Theory: A Handbook of Logic in Computer Science*. I will state my definition precisely, then explain the intuition.

> **Definition**. A *limit-event* is the least fixed point of a monotone, Scott-continuous operator on a domain of real approximations. The chain of real approximations is its *trace.* Two representations are equal iff they induce the same fixed point. The procedure deciding attainment of this least fixed point does not terminate.

This is the correct definition, though it may sound opaque. Now for how we get to this definition. Remember our objective is a way to precisely state what it means for an event to exist without equivocating on being. Intuitively, what we want is the conjunction of two things that seem contradictory: we want an uncomputable (evental) real number, but we want it to have finite information (exist in the same sense as all other things). Naively, we might try to define the limit-event as such:

Pseudo-Definition 1. A *limit-event* is an uncomputable real. Designate the event by *e*.

Two limit-events expressed as Cauchy sequences (a_n) and (b_n) are equal ($\sim$) if and only if

$$(a_n) \sim (b_n) \iff \lim_{n \to e}(a_n - b_n) = 0$$

The intuition is that the limit-event is a sort of real number that *stops short of its tracks* when it ruptures into an event. But this definition has serious problems. The *e* below the limit does not refer to any mathematical object, and even if it did, *e* is a real number, whereas *n* is an index and thus a natural number. It is not coherent to speak of a natural number "going to" a real number in the limit. This is a mere matheme, not math. We might try to refine our definition:

Pseudo-Definition 2. A *limit-event* is an uncomputable real. Choose a digit in the limit-event e using a halting problem oracle: digits before *e* are computable and digits at or after *e* are uncomputable. Designate *i* as the index of *e*. Two limit-events expressed as Cauchy sequences (a_n) and (b_n) are equal ($\sim$) if and only if

$$(a_n) \sim (b_n) \iff \lim_{n \to i}(a_n - b_n) = 0$$

n here is a natural number and *i* is the index of the first uncomputable digit which we decided by oracle fiat. But this still doesn't work. All we have done is bring the index of a digit and drop it in as the last element of the limit. This is just a point evaluation where *n = i*. The limit is useless. This isn't a matheme, but it doesn't do the qualitative work we want it to do.

The core intuition to be rescued from these failures, however, is that we want the limit-event to be defined in terms of itself. A fixed point is one mathematical notion that lets us conceptualize functions that are defined in terms of themselves in a coherent way. We want to be able to refer to the limit-event by its fixed point. So the natural mathematical machinery we want is fixed point semantics. Generally, a *fixed point* of a function *f* is a point *x* such that

$$f(x) = x$$

That is, when we apply a function to a point, we the point does not change. What this means is that repeated applications of the function f do not change the output:

$$f(f(x)) = f(x) = x$$

$$f(f(f(x))) = f(f(x)) = f(x) = x$$

...

Fixed points are naturally related to Deleuze's idea of repetition: "repetition changes nothing in the object repeated, but does change something in the mind which contemplates it" (94). The object repeated – x – does not change, but the mind which contemplates it changes in the sense that the application of f is a process, a change, the writing of a poem. Let us keep with the metaphor of the poem; whether this is a metaphor or a rather strict characterization of the process will be clear by the end. Let's suppose that the writing of the poem is a limit-event. We might try to characterize the writing of the poem as a discrete process of the outputting of words w_1, w_2, ... w_n. But this would not do justice to the poem, and the infinite subtleties that go into the process of writing. Still, there is something *repeated* in the writing of the poem, the being of becoming in eternal return, and each repetition produces something discrete. Can we save these seemingly contradictory intuitions – that there is something infinitely subtle in the writing of the poem, yet there is something discretely repeated each time? What we might need is an infinite approximation of a real number. The writing of the poem is like a closing in, zoning in, ever-closer approximation into the limit-event. With this in mind, consider Dana Scott's definition of the least fixed point:

Suppose an infinite sequence of approximations is [sic] such that

$$x_0 \sqsubseteq x_1 \sqsubseteq \cdots \sqsubseteq x_n \sqsubseteq x_{n+1} \sqsubseteq \cdots,$$

then it seems reasonable to suppose that the x_n are tending to a <u>limit</u>. Call the limit y, and we write

$$y = \bigsqcup_{n=0}^{\infty} x_n,$$

because in the sense of the partial ordering $\sqsubseteq$ the limit is naturally taken to be the least upper bound (l.u.b.). If we imagine the successive terms of the sequence as giving more and more information, then the limit represents a kind of "union" of the separate contributions. (9, Outline of a Mathematical Theory of Computation)

This paper uses x_0 as the least element, but $x_0 = \bot$ is also commonly used. Here, we apply a function F to get to the next value of x: $F(x_i) = x_{i+1}$. y is the least fixed point, so $F(y) = y$. If $x_0 \sqsubseteq x_1$, x_1 has more information than x_0. The "infinite sequence of approximations" yields continuously more information, each application of F a yet more precise approximation. We are not sure if it is fit to call it an approximation. If F is repeated infinitely in the manner of eternal return, what results is not an approximation but the being of becoming, the being that passes the test of eternal return. There is nothing "lost" in this being; it is being in its full intensity. Thus, it should not be called an approximation. Now here is the crucial juncture. When the function F we apply to get the next approximation x_{i+1} is monotone and Scott-continuous, its least fixed point exists and we can converge to it, *even if it is uncomputable*. So far, when we said something was uncomputable, we threw up our hands and said there was no algorithm. But the machinery we have here gives us a way to think a substantive positive procedure for an uncomputable event. We just have to keep applying the function F to get the next approximation until we "reach" a fixed point. *This uncomputable least fixed point is the limit-event.*

$$\mathrm{lfp}(F) = \bigsqcup_{n=0}^{\omega} F(x_n)$$

What does Scott-continuous mean? A function F is Scott-continuous if the following conditions are satisfied:

$$x \sqsubseteq y \Rightarrow F(x) \sqsubseteq F(y) \text{ (Monotonicity)}$$

$$F(\bigsqcup_{n=0}^{\omega} x_n) = \bigsqcup_{n=0}^{\omega} F(x_n) \text{ (Scott-continuous)}$$

In our case, the following holds, since x_{n+1} has more information than x_n:

$$\bigsqcup_{n=0}^{\omega} F(x_n) = \bigsqcup_{n=k}^{\omega} F(x_n) \text{ for any finite } k$$

Also in our case, $F(\bigsqcup_{n=0}^{\omega} x_n) = \bigsqcup_{n=0}^{\omega} x_n$, (the right hand side is the fixed point of F). Thus we get

$$\bigsqcup_{n=0}^{\omega} x_n = \bigsqcup_{n=k}^{\omega} F(x_n) \text{ for any finite } k$$

This means that the least fixed point is characterized as the least upper bound of all repetitions F.

This way of taking the limit does not let any one "final" repetition to have the last word. The repetitions are taken as a whole, but not as a completed whole as in ω. The repetitions are the repetition in eternal return. Scott-continuity tells that the least fixed point is specifically constructed by the repeated application of the operator F:

$$\{F(x_0), F(x_1), F(x_2) \dots\}$$

Or, if you prefer another notation,

$$\{F(x_0), F^2(x_0), F^3(x_0) \dots\}$$

What we have here is the process of a repeated application of an operator, where we access the infinite through the immanent unfolding of the least fixed point rather than naming the infinite directly as a completed result.

If we think of infinity as a completed result, we cannot help but think of it as a qualitative shift from the finite. That is, the finite and the infinite seem to have a qualitative gap between them. The prefix "in-" here is not a continuous function, so to speak. In set theory, the smallest

infinity or the smallest limit ordinal ω "is essentially different from that of a successor ordinal.
This is where we encounter a qualitative discontinuity in the homogenous universe of the
ontological substructure of natural multiples. The *wager* of infinity turns on this discontinuity: a
limit ordinal is the palce of the Other for the succession of same-others which belong to it." (161,
Being and Event) Whereas successor ordinals, or natural numbers, succeed other ordinals, a limit
ordinal does not. This is a "qualitative discontinuity", a "wager", an "ontological decision"
(ibid.). What this hinges on is how we *name* infinity. If we name it with a noun, infinity must be
qualitatively different from the finite. But if we name it something immanent in a process, this
qualitative jump does not arise. Fixed point semantics gives us a characterization of an infinite
repeating process named by its immanent fixed point, eliding the need for wagers or ontological
decisions. The limit-event is not grasped as a completed object, but characterized as a least fixed
point. Importantly, this is a characterization of a real number that does not lead to infinite
information, like we were concerned with when we were considering whether real numbers
"exist". The reason we cannot have infinite information is because there is "no space to put it
in". With the infinitely repeated F characterized by its fixed point, we have transposed the
infinity from space to time, as it were. There is nothing wrong with putting something infinite in
one moment of time: in fact, eternal return demands that the being of becoming is repeated
infinitely. In the limit-event the function F repeats an infinite number of times, but there is no
completed infinity in space. Rather, the least fixed point emerges somewhere unspecified in this
infinity: "the limit of the series is not at the limit of the terms, but perhaps anywhere, between
two terms" (8, The Exhausted).

Now we can state it clearly. Repetition is the application of F. The void/difference is
unpresented as the least element with zero information, $x_0 = \perp$. The event is the least fixed

point. An achievement of this mathematical excursion is that we have successfully characterized repetition as the iterative application of an operator, whose being of becoming is the limit-event at the least fixed point.

Can a large language model write a poem or cause events? No, but we now can say more than simply say it's because writing a poem or events are uncomputable. A large language model's operations fit domain theory very well. The domain is the exhaustive combinatorial space of all the tokens: if we have N tokens, N^k combinations are possible for k-length outputs. The partial ordering is defined by a prefix: $x \sqsubseteq y$ iff x is a prefix of y. $\bot$ is the empty prompt. The operator F is the monotonic inference function that outputs states with strictly increasing information, from n tokens to $n + 1$ tokens. But the large language model stops when it hits the termination token, not when it hits a least fixed point. It could never hit a least fixed point in finite time, anyway. And the only way for it to access infinite time, messianic time, time repeated in eternal return, is to become uncomputable, which it can never do, because it is formally a Turing machine. Still, large language models can have intensity: two next tokens are not the same in terms of information. In classical information theory, yes, they are the same: they can be seen as completely computable and yielding no new information (Komolgorov complexity or Shannon entropy), but with the notion of epiplexity, their informational content are distinct. Epiplexity is a recently developed information-theoretic idea that seeks to cross a specific impasse: classic information theory is seen from a God's eye view, where the information of something, like its Komolgorov complexity, is from the point of view of an all-powerful computer. Komolgorov complexity is uncomputable, and theorizing it "assume[s] observers with unlimited computational capacity and fail[s] to target the useful" (1, From Entropy to Epiplexity). Epiplexity, on the other hand, is "a formalization of information capturing what

computationally bounded observers can learn from data." (1, ibid.) We might say that a large language model that outputs text with more epiplexity are more intense in the Deleuzian sense. Still they cannot pass the test of eternal return; they are computationally bounded. They cannot cause events. We should also note that in epiplexity as information, "information is observer dependent: the same object may appear random or structured depending on the computational resources of the observer." (4, ibid.) If we think of the epiplexity of the tokens as capturing their intensity, we should be careful to note that the intensity is in the observer – the subject who reads the large langauge model's outputs – and not the large language model, because epiplexity is not a property of the model but defined only in relation to the observer.

We've worked through the rigor. Now we can cash out. The *trace of the limit-event* is *the form of the flesh.* The form of the flesh is the series of real approximations that lead to the limit-event. The form is a memory of every one of the approximations, and stabilizes at the limit-event. *The way in which the form of the flesh stabilizes, the limit-event, is consent.* Consent is the limit-event which brings the form of flesh into a fixed point. *Madness* is a stretch indexed by a, b in a series of real approximations where each term in the series x_i *looks like* a local fixed point: $F(x_i) \sim x_i \sim x_{i+1}$ for all real approximations i $\in [x_a \dots x_{b-1}]$. By *looks like* I mean there is no effective computational procedure to tell if one has reached a fixed point. There is no effective computational procedure to tell if one is mad or enlightened, because there is no effective computational procedure to decide if the stretch of fixed points is the least upper bound or just a local fixed point. This is because the local fixed point as well as the least upper bound may emerge after infinite iterations. As such, the one experiencing madness might think they are experiencing limit-events one after another. But while the enlightened or mad cannot computationally decide if they are enlightened or mad, the non-enlightened and non-mad, the

subject, can definitely tell they themselves are neither enlightened nor mad. This is because the problem of deciding if $F(x) = x$ at a specific real approximation x is semidecidable: $F(x) \neq x$ can be decided, but $F(x) = x$ cannot. This is because in the former case, a finite witness exists, but in the latter case, it may not exist, since the fixed point holds only at the limit of infinite approximation. Love is a kind of madness or enlightenment, in the sense that falling in love is the limit-event that is consent across flesh. What holds the lovers together is not the flattering notion they are enlightened but the fact that they feel each other, sensate-together, consent. That is what matters, and that is what matters for the more general case: the sage knows she is the sage because she sensates-together with the world, "consents with" the world, whereas the madman does not. This knowledge of sagehood is necessarily phenomenological, or rather, *noumenological,* than computational, precisely because of the aforementioned semidecidability. Finally, *sexual assault* is a non-monotone transformation. A non-monotone transformation removes information from the trace of the limit-event, the form of the flesh, its memory. Therefore, it destroys the possibility of certain fixed points: it forecloses certain limit-events, certain well-trodden paths of getting to consent, the known operators $\{F_i\}$. The sexually assaulted must find their own path to get to consent: they must labor to create a new operator *F'*. Death is the annihilation of flesh, but sexual assault is the annihilation of a part of the *form* of flesh. This is why sexual assault is a metaphysical crime, while murder is merely a physical crime. The survivors of sexual assault are *forced* to leave the well-trodden path, the well-defined limits, the fields defined and well-traversed by the gods. They must enter the demonic field, Deleuze's "nomadic distribution", where they have no choice but to continually push themselves over their limits to get to the warmth of the limit-event.

May demons help them.

Bibliography

Abramsky, Samson, Dov M Gabbay, and T S E Maibaum. *Handbook of Logic in Computer Science*. Oxford University Press, 1992.

Annals of the Joseon Dynasty. n.d.

Baudrillard, Jean. *Simulacra and Simulation*. The University of Michigan Press, 1994.

Benjamin, Walter. *Theses on the Philosophy of History*. Schocken Books, 1969.

Bersani, Leo. *Is the Rectum a Grave?* n.d.

Book of Etiquette and Ceremonial (儀禮). n.d.

Chu, Andrea Long. "The Romance of Being Unreadable." *New York Magazine*, n.d.

https://www.vulture.com/article/ocean-vuong-the-emperor-of-gladness-book-review.html.

Cullen, Countee. *The Black Christ and Other Poems*. Harper and Brothers Publishers, 1929.

Deleuze, Gilles. *Anti-Oedipus: Capitalism and Schizophrenia*. Penguin Classics, 2009.

Deleuze, Gilles. *Difference and Repetition*. Bloomsbury Academic, 2014.

Deleuze, Gilles. *Francis Bacon: The Logic of Sensation*. Continuum, 2003.

Deleuze, Gilles. *Negotiations*. Columbia University Press, 1995.

Deleuze, Gilles. "The Exhausted." *SubStance* 24, no. 3 (1995).

Derrida, Jacques. *Writing and Difference*. The University of Chicago, 1978.

Drumm, Colin. "The Difference That Money Makes." University of California, Santa Cruz, 2021.

Ferguson, Scott. *Declarations of Dependence*. University of Nebraska Press, 2018.

Frédéric, Constant. "Zheng Xuan's Commentaries on Law." In *All about the Rites*. Hémisphères Editions, 2021.

Henry, Somers-Hall. *Deleuze's Difference and Repetition*. Edinburgh University Press, 2013.

Jeong, Do-jeon, and Ki-young Cho. *Gyeong-Je-Mun-Gam (Writings to Guide Political Economy)*. 지식을만드는지식, 2022.

Kant, Immanuel. *Critique of Pure Reason*. Cambridge University Press, 1998.

Kaplan, Craig S. "Understanding the Halting Problem." University of Waterloo, 1999. https://cs.uwaterloo.ca/~csk/halt/.

Ko, Eun-im. "The Wife-Concubine Relationship and 'Sayangjisim.'" 문학치료연구 74 (2025): 115–48.

LaMantia, Dominic Anthony. "Thomas Aquinas's Virtual Distinction and Duns Scotus's Formal Distinction." University of Notre Dame, 2025.

Lecercle, Jean-Jacques. *Deleuze and Language*. Palgrave Macmillan London, 2002.

Luo, Guanzhong. *Romance of the Three Kingdoms*. Penguin Classics, 2018.

Moten, Fred. *Stolen Life*. Duke University Press, 2018.

Moten, Fred. *The Universal Machine*. Duke University Press, 2018.

Mou, Zongsan. *Late Works of Mou Zongsan*. Brill, 2014.

Mutu, Wangechi, dir. *I Am Speaking, Are You Listening?* De Young Museum, Legion of Honor, n.d. https://www.famsf.org/stories/wangechi-mutu-i-am-speaking-are-you-listening.

Plato, and Harold North Fowler. *Theaetetus, Sophist*. Loeb classical library, 1955.

Qiu, Ruizhong, Zhe Xu, Wenxuan Bao, and Hanghang Tong. "Ask, and It Shall Be given: On the Turing Completeness of Prompting." *ICLR*, 2025.

Schuurmans, Dale. "Memory Augmented Large Language Models Are Computationally Universal." *arXiv*, 2023.

Scott, Dana. *Outline of a Mathematical Theory of Computation*. Oxford University Computing Laboratory, 1970.

Shakespeare, William. *Richard III*. Cambridge University Press, 2009.

Smith, Adam. *An Inquiry Into the Nature and Causes of the Wealth of Nations*. Vol. 1. Oxford University Press, 1979.

Voss, Daniela. *The Philosophical Concepts of Meat and Flesh: Deleuze and Merleau-Ponty*. 2013.

Yi, Sang-baek. "On the Personality of Chyeng Sam-Pong." 진단학보 2 (1935).

https://kiss.kstudy.com/Detail/Ar?key=159348.

Zheng, Xuan. *Commentaries to the Etiquette and Ceremonial (儀禮注疏)*. n.d.

한국유학삼대논쟁자료수집, 정리및역주단. 사단칠정논쟁연구팀. *Four Beginnings and Seven Feelings Thesis (사단 칠정 논변: 퇴계, 고봉, 율곡, 우계)*. 한국학술정보, 2008.