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Collective Improvisations: Amiri Baraka and the Articulation of Blackness Across Socio-Cultural Movements

Abstract**:**
In 1966, Leroi Jones, soon to be Amiri Baraka, outlined a program to reorient the philosophical underpinnings of Black study. Modes of inhabiting and thereby constructing the domains in which one participates were revealed as a function of one's mode of expression. Jones/Baraka proposed that blackness was expressed by the operation of a collective improvisation. How can improvisation, traditionally conceived as an individual activity, be a collective process? Taking our cue from articulation theory and the request that it be formalized by Stuart Hall, we explore what may superficially seem counter-intuitive but is able to be modeled by way of an explanation of its generative syntactic structure. In so doing, puzzles associated with identity theory, intersubjectivity, and modalities of expression are revealed as not as intractable as they are assumed to be, especially within the discipline of Black studies.

Keywords:
improvisation, Leroi Jones, Amiri Baraka, functional content, identity theory, intersubjectivity

LeRoi Jones/Amiri Baraka in *Black Music* stated,[1]

> A contemporary form of collective improvisation … is a very plain indication of [a] changed sensibility. The return to collective improvisations, which finally, the West-oriented, the whitened, say is chaos, is the *all-force* put together, and is what is wanted.

What was being formalized was the concept of the "changing same."[2] This concept makes an argument which claims that "[form and content are mutually expressive,"[3] and constitute the "expression of reflection."[4] Seemingly integral to Black cultural study with respect to the content of Black modes of expression – whether it is void, according to Frank Wilderson III,[5] historically overdetermined, according to Orlando Patterson, or as I have put elsewhere, recursively generative – has proven to fall along lines frequented by logic and the philosophy of language. Self-reflection has been shown to be intractable in formal systems but can be defined as a recursively generative operation – see K. Gödel.[6] So how do we go about, in a Jonesian/Barakian sense, formalizing this recursive function without an "obstruction of self"?[7] How do we prove the function of the content of modes of expression without predetermining that that function is identical with an object presupposed as the determinate of our inquiry? This would inevitably delimit the scope of our inquiry before it gets off the ground. More often than not, these assumptions leave out the possibility of explaining what occurs because of what is sought after, because it does not appear as presupposed, is negated because it does not fit in with that predetermination?

Self-reflection comes down to the formalization of a domain of expression that is a proper subset of itself.[8] By definition, this defines an infinite recursive operation, not the definition of a concrete thing to which a label refers regardless of context. Try to speak of infinity as a totality and see the results. Thus, the content of this type of assertion is functional. It is explained by way of its being indexed to the context in which its application is appropriate; thereby constructing subsequent instances, contexts, of that assertion that cite those means of construction embedded in its contextual predecessors and whereby later assertions can be said to be valid – see K. Gödel's diagonalization proof as well as his definition of infinity.[9]

What does this have to do with Black studies? It may be easier to state what a field of study is before asking about its constitutive subject, its object(s). In 1905, WEB DuBois in "Sociology Hesitant" suggests that theorists look to physics to explain the concept of double consciousness as a consequence of the network of norms and institutions in which Black-ness emerges. Double consciousness is the necessity for Black identified individuals to simultaneously cognize themselves on their own terms as well as the dominant racial class. This "two-ness" was posited in physical terms, neatly summarized by physicist Timothy Andersen. A field is a possible set of descriptions applied to positions within a mapped domain. Indexed relationships between descriptions become the "nouns" of a theory. These encodings frame the regions of that domain. "Study" models how these nouns

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1) Jones, *Black Music*, 222.

2) Ibid., 181.

3) Ibid., 211.

4) Ibid., 214.

5) Wilderson III, *Afropessimism*, 103, 242–243 (with many references to blackness' "absolute dereliction," "nothingness," "aporias," etc. throughout the text).

6) Gödel, *Undecideable Propositions*, 37–47.

7) Ibid., 230.

8) Smullyan, *A Beginners Guide to Mathematical Logic*, 276.

9) Gödel, *Undecideable Propositions*, 12, 65–72.

traverse, that is to say are translated, across different regions. One integrates the sum of possible paths across fields to render the object of study. Thus nouns' (identities') significance is expressed by how they traverse fields, articulating a concept as a function of their operation, not necessarily their prior definition; hence, the noted difference between Black-ness (functionally-equivalent identities) and blackness (the subject). Identities are functionally-equivalent where the encoded relationship between descriptors holds/coheres across objects. Experiments across fields set conditions whereby encodings between predicates are tried to test the extent to which these object-relations emerge and their objects related across sub/co-domains.

Now we can ask about Black studies. At the onset of Cultural studies, Stuart Hall would posit the above process through the social communication theory he developed to study Race and racialization. His encoding/decoding model to the articulation of societies structured in subordination and dominance entailed that a subject encodes relations between features of their experience and projects that encoding in future contexts to organize that experience so that what emerges from that framed set of relations between features, the objects in which those relations cohere, can be said (i.e., are decoded), as functionally-equivalent to the objects upon which that encoding was trained. Thus, the frame utilized/allowed determines what experiential inputs enter cognition and what outputs/responses are allowed/licensed environmentally. This process is scalable. Where relations between encodings across subjects are indexed norms emerge across individuals. Relations between norms are indexed as institutions. Finally, relations between norms and institutions determine what inputs are available to which areas of a domain. Consequently, one can analyze how certain areas are over or underdeveloped, how fields are "disciplined" into discrete entities, how the output of a subject utilizing what is available to articulate their position with respect to that infrastructure is only meaningful when that output is fed back into that system. We see why sub/counter-cultural formations arise where and how they do and how they are related while superficially different. Cultural studies becomes one of sociologically calibrated biological systems subject to material analysis. Sylvia Wynter renders this under the sociogenic principle, how concrete sensate cognition and feedback explains how these cultural infrastructures emerge, how they evolve, adapt, and cohere in and through the objects in which the relationships they index cohere.

As the same relationship between features of experience and socio-cultural and political life cohere across entities, Hortense Spillers in "The Black Studies Project: 50 Years and Counting" would posit Black study as an inherently inter/infra-disciplinary subject. Just as infrastructures of trade, knowledge, and bodies across the Atlantic and Pacific made Black-ness cohere trans-continentally, relating its cognate identities across regions across networks, so too must its study be networked such that non-local actions concretize locally, providing an account for the concept of diaspora. Black subjectivity must be historically situated but adaptive as its past output becomes future input, altering the domains through which it operates. Blackness articulates discrete but functionally equivalent expressions that constitute what blackness is by way of how it is context-appropriate, yet not always interchangeable identities are mutually constitutive of the concept.

Theories adapt, revising their vocabulary as evidence of their extension arises – see T. Andersen; otherwise, theories negate most of what contextually constitutes their subject.[10] This is what we mean by Black-ness being constituted by a repertoire of functionally-equivalent, yet not interchangeable, identities that does not stretch the concept to insignificance. Overdetermination of others by one identity evidences instituted norms of control

10) For example, names prior to their application, at their zero-th instance or the point at which they index a relation between context and use, can be related whereby A=B but A_1 is not B_1 with A-successors referencing its predecessors back to the conditions licensing its use – see Turing, *Ordinal Logics* and Fara, "Names are Predicates." However, if that relation is indexed, then even if not interchangeable, A,B can be functionally equivalent, like nicknames. This is not forever, for C_0 can equal A' or B' but when made equivalent to one may contradict a member of the other line, showing the extent to which that nickname makes sense.

and manipulation. How fields are defined begs how they are structured. The relations between frames, relations between norms, dictate how their subjects travel as it is only when that subject's output is fed back into that system does the object of study have a determinate function with respect to the frame organizing/acting upon that area of the domain. Black-ness is the analysis of the operation of Black identities as they emerge and their function affecting the fields traversed as they provide input to their future articulation in previously inaccessible sub/co-domains. The subject(s) of a field of study must collectively attend to structures determining how and where their object coheres, maintaining a functional relationship despite superficial differences. This amounts to a finite yet open framework that allows for actions in one area to extend our case and adapt to explain how subjects emerge and evolve. Hence, Amiri Baraka's point that blackness, as a project, must seek a collective improvisation: taking what is available and putting it to use in ways relevant to the current context, because gathered with the materials licensed therein, yet at times, in unexpected ways thereby subverting disciplines prohibiting its mode of expression. The unexpected forcing the overarching frame to adapt, which is what improvisation shows.

Within the discipline of Black cultural studies, the best way to investigate this concept is through a formulization of the functional-content put to use by improvisation. In the same collection of essays, LeRoi Jones would state that the music *is* the people. Improvisation can be said to be the result of a mechanism that produces expressions appropriate to context but not necessarily caused by it. Therefore, these expressions are not random, remaining continuous with the subject of the song being composed, albeit superficially, their "sound" may differ from its predecessors. When we speak of a mechanism, it is important to note that we are not speaking of any "physical" interaction but a series of operations that explain the emergence of inferred causal links that may describe the physical or may remain objects of mind. In this way, these connections are material (i.e., causal), but not necessarily explained by what is determined physically, requiring a framework in which the function of the term physical can be defined. These operations can be modelled by an "if/then, else" operation where after each "then" we can substitute another "if/then, else" condition. The function of this operation expresses the composition of the entity being articulated. If this process was based only on the physical, we would presuppose the evidence of the process as the process itself, leaving most phenomena unexplained and pre-emptively limiting our scope of inquiry.

What would the physical evidence of infinity be? Outside of a reference frame in which the function of the term "physical" is determined, what would a non-regressive definition of gravity be without taking evidence of its effects as identical to its cause? In this light, improvisation is revealed as a capacity emblematic of the mechanism exhibited by a language faculty. As language, in order to remove identity paradoxes, is a means of creating thought, not necessarily what comes out of one's mouth – for how would we explain how those expressions were produced in the first place? – this mode of expression allows us to get closest to formalizing the manner in which a subject is articulated prior to identification. The hope is to do this without presupposing that that subject must be interchangeable with some identity predetermined in the reference frame we employ. As the music *is* the people, our study attempts to abstract the function whose operation goes to express that people in such a way that they are composed of individuals that are not mutually exclusive.

How do we attend to the concept of collective improvisation? To know thyself in this configuration is to construct one's self. Although one cannot know one's self as a totality, because in the process of construction, if the determinate of a function can be defined then that mode of expression is conceivable.[11] One cannot conceive of infinity as a totality – an issue of self-reference. However, we can conceive of infinity by way of its means of construction, (e.g., 1/0=infinity, i.e., the functional-content of "infinity"). As a result, we find that there are many infinities. Just like the reals are understood as numbers by virtue of their means of construction, from the finite means of 1 and 0, there are infinitely many reals constituting that interval. Infinite use of finite means.

11) Kurt Gödel, *Undecideable Propositions*, 12.

Under this rubric, we will consider a collective improvisation by way of its means of construction. Its assertion, then, must only have functional-content. Each function being the determinate of an object of thought by which a subject is articulated. The collection of these functions, whether by an individual or shared, compose a repertoire of signifying practices in which dependent on contextual borders may superficially appear different, retain a subjective continuity by way of a relation between those with this recursive generative capacity. Where in linguistic studies regarding modes of expression this would entail one's lexicon, here this will be considered the cultural endowment from which a principle of equivalence (i.e., continuity), is projected from a domain of selection to one of composition – see V. Peterson II on the articulation of social movements.

We will not presuppose what counts as the entity of study in the study itself, for example what constitutes the meaningful so as to make a study of meaning. Consequently, we do not onboard an identitarian praxis assuming the constitution of an individual as given before explaining its mode of expression. Therefore, we take a null assumption. However, here, the null set is composed of no one object. Set-theoretically, the null set is the only set that contains itself as a member, so as of yet, what is a member of null is insignificant to any one context, although that domain contains the means of composing any context. It is not that we assume nothing, but that we take the determinate of a function in itself, before its application, as being defined at its zero. The zero of a function determines the zero-th member of a series upon which that function's operation bases all subsequent members. These zeroes, functions in themselves as the objects of one's endowment, constitute the null. As such, implied by our experience is that there are objects of thought constituting subjectivity before the product of their use is identified. These members of the domain of one's subjectivity – cultural endowment, in other words mind, consciousness, et al. – can be determined as the zero of the function constructing that experience before their application. Thus, it is possible to explain what constitutes subjectivity before it is identified; to show how it is possible, as with studies of consciousness and mind, to encode a seemingly infinite possibility within finite means.

Once the presupposition of identity as primary is done away with, which would make a functional process concrete therefore negating that function's operation before it starts, the theory produced by and within and with individuals is able to explain its self-realization. This amounts to its articulation or emergence given the context. The context to which its application is indexed is determined by an antecedent condition in which that function's use named the context of its appropriate application. Understanding that the self cannot be had without understanding the function of the composition of the conditions, or system, in which that self is situated entails that those conditions are jointly constituted by individuals utilizing similar capacities – see infinity recursive example. In this way, the collective composition regarding the expression of a particular state of affairs can be explained. This explanation of their mutual operation, albeit singularly considered move towards alternative functional ends, shows how individuals become related in some way to articulate that state. It also shows how its systems are manipulated. Unwed from a constitution presupposed in the inquiry, we can explain how functions that operate over time can produce novel expressions within the same conditions – see 2,3 Turing machines producing and introducing unexpected functions into a domain – see also Alex Smith's 2007 (published 2020) proof.[12]

A function is expressed by a relation between input and output. Therefore, what is called a function's "image" is projected from one domain into a codomain. For all intents and purposes, this image becomes the object, a representation of an underlying operation. Poetic computation will here be formalized to show the projection of a principle of equivalence from a domain of selection to a codomain of composition. With this concept in hand, we will be able to explain the function of collective improvisation. This projection, then, is the image of a people.[13] The best way to understand this is through functional currying. A function that

12) Wolfram, *A New Kind of Science*, 709.

13) Jones, *Black Music,* 211.

takes others as input and translates that into a function as its output that, when applied, produces a composite image of its predecessors. What is revealed is that, as in language, externalization is secondary to composition; communication, that is to say semantics, is a tertiary operation. Semantics do not reference things in the world but an expressions' means of construction detailing appropriate use. If underlying syntactic structure is provided, what is needed for semantics is embedded in the underlying structure exhibiting the possible uses of that phrase. The putting to use of that syntactic material implies an operation of construction, thereby the concept of subjectivity we are after, "beyond 'what is given'."[14] If we understand this process, then the underlying structure to what is meant by a collective improvisation emerges, how the functional-content of expressions through their operation acquire flesh.

How, then, do we posit a coalition of signifying practices, in line with Henry Louis Gates Jr.'s analysis, identified in ways appropriate to context, for identity must be one to one with context, but not necessarily caused by context, therefore not random? How do we do this and maintain subject continuity? How do we provide an explanation for the formation of this coalition, despite that subject's collective improvisations – under various signs appropriate to because indexed to the contexts in which that subject's participate – seeming, superficially, discontinuous? How do we also posit this notion without presupposing a singular identity under which multiple individuals are made interchangeable, for example Race, thereby negating the collectivity of the improvisation for the sake of a singular expression which no longer seems improvised at all because presupposed? Our investigation will be conducted with the principles outlined above so as to explain not only the concept of collective improvisation in the socio-cultural and political writings of LeRoi Jones, but also account for Jones/Baraka's edict to "attack with a hundred shades of black." Furthermore, we show how blackness maintains subject continuity while positing multiple identities resisting a one-to-one correlation between subject and identity stipulations.

Our problem stems from an issue regarding naïve applications of identity theory. If two individuals x,y are such that they retain a notion of identity, then $x=x$, $y=y$. Thus, x=not-y and y=not-x. However, if made interchangeable under a particular category, there is a possible interpretation in which x=not-x, if we assume that $x=y$ under that label – see Gareth Evans on vagueness. We must be able to attend to the notion that the subject can be known under many names without this contradiction arising. A single name can label many individuals; the same individual can be known under many names. If a subject's name is not constant across contexts, as names are indexed to the contexts providing the condition of their appropriate use, the necessary one to one correlation between individual and name, regardless of contexts, and required by identity theory leads to the paradox above. The "regardless of context" portion of the formulation is key, for identities are necessary. They must hold in every context in which that identification is made. How do we posit a relation between names where the subject can be considered the same subject despite its superficial and contextually dependent appearance with respect to categorical boundary, nation, state, etc.? Also, how can a multitude of subjects maintain their individuality, but the use of various names in a consistent way to express the same sentiment?

As above, we treat identity assertions as only having functional-content. In this way, an identity is a relation between a set of individuals; it does not mean they are interchangeable but an identity is a set of equivalences between equivalences – see our encoding/decoding model above. The assertion of a collective improvisation then is expressed by the composition of functions in which that collective assertion's functional-content takes other functions as input and produces a composite functional object as output. If each function going into that currying process is injective, then their composite should be injective as well.

First, we must show what we mean by "injective." An injective function is one that maintains a one-to-one correspondence between a domain and a codomain. The projection of that function from one domain to

14) Ibid., 224.

the codomain creates an image of that former domain in the latter. This image's content will be considered by the determinate of the function by which it was constructed. Thus, the first image constructed is a one-to-one relation that obtains between a domain which is a determinate subdomain of itself. By definition, this is the set-theoretical explanation of infinity by way of recursive, constructive, operations. We posit that subjectivity is an operation whose object is a function. As infinity is defined by a recursive operation, the self, then, is expressed as the image of a generative function that is a one-to-one map with/of its determinate.

We can abstract this concept from our observations in the following way. Given a feeling, we understand this as a change in self, brought on by one's state of affairs. When the conditions in which that function is implicated changes, input changes, therefore the output image changes although the function itself remains the same. It is hard to consider a feeling that is not such without being an object of one's consideration. The content of the feeling is functional, a relation between context and assertion. From here we can deduce reasons as to why this change occurred. The relationship between various reasons presents the shape of the mechanism expressing that subject. The various pathways through this network represent different causal explanations for why this state of affairs obtained. When attention is given to a particular path through this web of reasons, this path being propositions that obtain a relation between reasons, a particular system is expressed by the function of a label attributed to the path encoding that response. This system of expressions is encoded so that the function of a pathway of reasons (x) expresses a concept (c) such that $(f(x)=x)=c$. When $c=x$ posits a relation between the function of c and the function of x. From there we consider this the marking of a context which is held constant with respect to successors built from that determinate – the context in which that individual is the object of its own expression. When taken as input for another that has access to that function's determinate, that other can decode that path and apply it in their state of affairs, seeing if it holds. In so doing, they test whether or not that system, (i.e., reference frame), is appropriate to their set of conditions, (i.e., context).

The assertion of that reference frame's content in itself (i.e., for the one constructing it), is marked as a constant in those circumstances. As above, this can be determined when $f(x)=x$, which is only valid at x's zero. The zero of that function defines the function in and of itself as the object being shared. Each successive application of that function, (i.e., when encoded so as to become the object of another function), is expressed by the function of that operation indexed to the successor of the context from which that function was initially determined. As $x=f(x)$, a composite or group function then is $f(x, f(x))=y$ becoming the determinate of the function g. Below we shall see how g posits a relation between a constant x and changes in y. Therefore, the determinate of g as a second-order function posits a relation between $f(x)=x$ and $f(f(\mathrm{x}))=x'=y$. As $y=0$ in the domain of x and $x=f(0)$ at its determinate, then $f(x, f(x))=x'$, a successor expressed as y determinate on x. This follows, for if $f(0)=c$, then $f(x)=x$ defines x's constant, therefore $fx(0)=c$, with the same being so for y considered in and of itself, $fx(0)=fy(0)$ meaning fx and fy are c-related. Here's our first allusion to positing subject continuity. With the null assumption one can articulate multiple discrete identities, indexed to determinate lines of successors, and remain the same subject without contradiction. Which c is dependent upon which combinations of functions are applied which entails which context that subject inhabits and which it does not, therefore different subjectivities.

Consequently, a change in the individual is proportional to or can be indicative of a change in a group given that individual's participation in the context in which it inhabits and whose conditions are the composite image of others. Otherwise, an individual would be indiscernible from the context itself and, therefore, the conditions of its emergence would be inexplicable. Also, the context of that individual could never change. One could not admit a change in individual without contradiction or that change would be unknowable because there would be nothing with respect to which it could be judged. Therefore, an individual is situated within the conditions representing the context in which that individual can be determined. Those conditions imply something that is not that individual. The context in which that individual is known as such is discerned in

relation to the proposition of others. This network of expressions admits a group for there is no evidence by which to disprove the possibility of others inhabiting that context possessing the same or similar capacity. Even if the individual denies its group, the point where what is not-*x* is "*x*" is representable at its zero, presenting the conditions for that individual being the case before the function by which it is expressed was applied. To deny these conditions, which by necessity are not-*x*, would be a denial of *x* itself. The functional-content of any assertion of what *x is,* is formulated at x's zero. As $f(x)=x$ only at zero, of what *x* purports that it is not becomes the basis for determining what x *is*.

With respect to conditions and assertions indexed to the context (i.e., an extension of those conditions), of their appropriate application, what we seek is a logic of satisfaction.[15] If assertions' contents are functional, and with those functions being indexed to and therefore labelling the context of their appropriate application, we must be able to show how the conditions of their appropriate assertion are satisfied in those context's successors. We posit that these expressions reference their context of assertion, not necessarily "extra-mental" things. Thereby, individuals can be known under different names but maintain subject continuity. The same name can be utilized for different individuals but does not make them interchangeable, leading to contradictions undermining the assertion itself. Just as intuitions, "feelings" cannot be known as such without becoming an object under consideration, thus motivating inquiry, and whereby their causes can be inferred by way of a relation of reasons expressing the shape of the mechanism producing that thought, a logic of practical inference by which the state of affairs achieved is ascertained from the form of the mechanism deduced from those expressions. The form of this web of thought is the shape drawn by the relation between reasons. Resultingly, form and content are aspects of the same operation, showing that we are still within the Jones/Baraka framework.[16] From here, we posit a basis for intuition as practical inference, the pragmatics of which form the underlying and generative syntactic structure by which we posit a self-relation in the world.[17] "Gut" and "brain" operations, for example,

15) See Hare, *Practical Inferences*.

16) Jones (Baraka), *Black Music,* 84; 211.

17) Some have considered this as a brain in the vat style thought experiment – see Gilbert Harman. Assume that the mind and body are mutually exclusive. One could supposedly test this supposition by removing one's brain from their body and connecting it to a computer that replicates the electrical pulses the brain receives through its neurological connections from the body. However, is this the same type of information received, for does not the body receive information from the outside world through electrical impulses, yes, but filtered through the body? Would this not just make what is called the mind or what is called a body the object of a proposition regarding the same subject, therefore different aspects of the same entity? After more careful consideration, it seems that the mind-body distinction and whether there exist other "minds" comes from this confusion much like it is not the case that the "I" is interchangeable with the self but that "I" has become the object of a proposition of self. Thus, mind and body and self and I do not point to things in the extra mental world but refer to the context providing the condition of their appropriate assertion, (i.e., meaningful only within a determinate frame of reference in which those object's function is defined at their zero so as to know how to apply them).

A logic of satisfaction entails that the shape of our logic is the formalization of a set of practical inference by which we can test our institutions can be modeled from what may be called a gut-brain axis. A logic of satisfaction, taken after R.M. Hare, can be modeled in the following way. If *x* or *y*, given *x*, therefore *y* is valid but when applied to imperatives, mail or burn, "mail," therefore burn seem ridiculous. However, it is the relevance between *x,y* which is key. We know that if *x*=mail and *y*=burn and we burn the letter, then the command cannot be satisfied for $f(x)$="x," in other words, express the predicate X, given the application of X's content, $f(x)$. Both institutions can be modeled as objects of thought but when tested against actualizable scenarios only one is appropriate while the other, although a valid option, is wholly inappropriate. From here we map a causal network of inferences the content of this web being functional, (i.e., relating decision paths), so as the models that emerge that are actualize-able give us the shape of the state of affairs we inhabit. Linking to improvisation, from a musician's repertoire of signifying practices, certain phrases' functional-content emerges during song conditions, others not, any one can be applied but the inference is to be made satisfiable within those conditions for functional-content are indexed to the appropriate context of its assertion. Thus, due to call and response, decisions are made which may appear different than earlier performances of the song but have recourse to a deep generative syntactic structure ensuring their relevance to the song articulated. This is what Jones (Baraka) called the "blues impulse" indicative of blackness' form of life. Improvisations produce images

bear a family resemblance within the same body. The gut, constituted by the enteric nervous system, and the central nervous system are individual but not mutually exclusive aspects of the mechanism by which we consider the world we inhabit. The concept of this mechanism is expressed by the function of this system's operations. Each represents a different aspect expressed by that system.[18] As there is anatomical evidence of this implicit connection, what we speak of here is the logical plausibility of a system in which a running set of inferences producing collective improvisations can be modelled. As a result, collective improvisations are based on the logic of a model for intersubjectivity by virtue of functional composition.

For this model, we will look at two formulations whereby the individual and the group can be related by the functional-content of their expressions. Individual expressions will be had by the function $f(x)$. This function is injective for it is possible to show where and when $f(x)=x$. Improvisations are expressions built from this base assumption, indexing the context of their assertion, and from which multiple lines of expres-

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of thought, given a function that expresses the capacity to articulate alternative contexts between individuals and conditions.

18) It is well known that the axis between the organ called the gut to the organ that is the brain connects these two systems. However, many formalizations of thought prioritize the latter. We showed that a "brain" would become a non-organ organ following this argument. As a thought experiment, however, we could propose two frameworks in which the organ that is the brain is an organ of the body and the "brain" is a term whose function expresses the operation of what we call the "mind." The enteric nervous system of the gut contains approximately 600 million neurons. Although less than the central nervous system composing the "upper" brain, this gut is autonomous, individual, but not mutually exclusive from the cognitive system overall. The "gut" can be considered a module of mind just as much as the "brain" can. We are not weighing computational prowess, albeit a brain, by computation alone, could not refer to itself by virtue of the terms of the system it utilizes. That organ would have to create a computation to define external conditions that would refer to some other computation regarding those external conditions with access only to resources internal to itself. Hence our focus on poetic computation as the manipulation of parameters determining computations, not objects to which the computations refer. Even with a quine machine, a machine that takes no input but prints its own code, it cannot be said that that machine can "read" the code produced, let alone understand it so as to reference that output in order to produce an alternative, for it receives no input. The function of its expression is left unaccounted for, even though it operates in sync, no relation between input and output can be formalized save for the print command deduced from the output. With an identity as primary approach, self-reference is nondeterminate and what is still wanting is a relation between its determinate functional-content with respect to the domain in which its output is appropriate which, no doubt, was constructed by some other operation. Thus, we return to an intersubjectivity required to read output as input and produce an output that related to that initial output under consideration. Even assumed in the quine-ing example, a function of application is still present although not represented, for someone wrote the code and embedded in the code is the print command to produce the same output regardless of the domain. Its function indexed to the context in which its application is appropriate is implied but cannot be accounted for by it alone if the sole purpose is to reference its own identity.

A brain in a vat could not know that it was in a vat, only determine a function that details what that would mean within the parameters set by the vat, outside of which it would not have access and yet is required for its being plugged into a system that could make that self-reference. The gut and brain are related but one system does not preclude, subsume, or negate the other for it is their relation that composes the causal assumptions we make in constituting a whole mind. Some see it beneficial to disengage the gut-brain axis so that one is seen as primary and/or more valid over the other. This assumption is generally ill-founded for a small deviation in gut function makes for compounding effects in second-order functions of the brain based on these base operations.

Correlated but not interchangeable, bodily changes (perceptions) can be indicative of a change in state of affairs (observations). These changes are later associated with specific events from which intuitions or theories emerge. Oftentimes, these "gut" intuitions are not in the foreground of phenomenal consciousness but become an emotion when attention is paid to these changes. A function is assigned to that specific object of bodily change. The labels traditionally associated with these "feelings" encode that predicate's function in which the object of a gut-change exemplifies that function, (i.e., a function which takes gut changes as input through a function encoded by past situations and expresses that conceptual label as output thereby relating label and its function to bodily change). It can then be said that a set of these relata in which gut expressions obtain functions in second-order brain functions. Second-order function elicits these relata which should not be confused with emotions in and of themselves but as culturally attuned activators to emotional functors. A gut change is associated with a range of conditions and represents a functional response to the current state of affairs in which an individual is situated. It is from this basis that we make intuitions the first-order function as the foundation for rationality labeled by second-order functions of the upper-brain, without which the functions expressing the thoughts of that brain would have no objects with which to express its self or produce thought in the first place.

sion, alternative uses, can be licensed because they refer to this initial determination. For example, x_0 is basis for any one expression, thus positing no one x in particular as yet for $(f(x)=x)=x_0$; secondly, x_1, x_2, x_3 are all successors of x_0, but not identical to each other, (e.g., 1≠2); finally, $f(x_0)=x_0'=x_1$, $f(x_1)=x_0''=x_2$, etc. All x-successors expressed by the operation of that function on a predecessor is valid just so long as that predecessor is so. Ultimately, like all other x-types cite x_0, the means of their construction, (i.e., $f(x)=\text{“}x\text{”}=x_0$, $f(x_0, f(x_1))=x_1'$ x_1-successor is f-related to x).

Collective assertions will be had by a function g that takes two arguments, positing a relation between them $g(x,y)$. This function can be derived from the former simply by assuming that x is self-related to itself, thus $g(x,x')=f(x, f(x))$ for $f(f(x))$=x-successor, (i.e., second-order function). In this way, y is expressed as a function of g with respect to an initial assertion x. It just so happens that self-reflexivity is a second-order function, positing a one-to-one relation between its domain as a subdomain of itself. The result is two-fold. We show that individuals can produce expressions of self and that solipsism is a non-starter. To posit that one is the only one, one must construct another by which they recognize themselves, contradicting their own premise.[19] Consider trying to change the world before changing one's self as if one is not a member of that world by virtue of their participation in its affairs.

Given the observation of group activity, we can infer that there is a function expressing one of the individuals of that composite. Thus, the assertion of x or y can be inferred by their being in some relation considering one as constant, from the context of the other, or by relating them to some other constant qua context. The function of the group, however, is not identical with that of the individual. We can state this in the following way. Given $f(x)=x$ we can infer, if f then x given the application of f. Since we can assume that $f(y)=y$ and if f then y given f, we can say that $f(x)=f(y)$. This is only the case when x and y are both at zero, (i.e., as functions in themselves before their application in their respective, individual, but f-related contexts). We understand this to be the case for just because $f=f$ does not mean that $x=y$, only $f(x,y)$. After application, they are no longer interchangeable for $f(f(x))$ is not the same as $f(y)$ even if $x=y$.

From determining the functional-content of stating that there is an x or there is a y, we can deduce the following axiomatic relationships between them. Conditionals can be interpreted with the following principles: "if/then" statements are valid if and only if it is not the case that we have a true antecedent and a false consequent given a true antecedent, (i.e., if x then y given x so that it is not the case that (x and not-y)). A valid conditional results in either a false antecedent condition, whereby the function indexed to those conditions are not applicable in this context, or a true consequent given that the antecedent satisfies those conditions. Therefore, the expression is appropriate because its functional-content is licensed within the current context. The following relations emerge:

[1] if $f(x)$: then not-($g(x,x)$)
[2] if $f(x)$, $f(y)$, and not-($x=y$): then $g(x,y)$ or $g(y,x)$
[3] if $f(x)$, $f(y)$, and not-($x=y$): then not-($g(x,y)$) or not-($g(y,x)$)
[4] if $f(x)$, $f(y)$, not-($x=y=z$), and if $g(x,y)$, $g(y,z)$: then $g(x,z)$

* [4] defines a currying operation

19) Case in point: if x is "x" can be asserted only at x's zero, (i.e., $f(x)=x$); if x is posited in relation to no other thing save itself, then $f(x, f(x))=x$, x is f-related to itself; however if x is at 0, thereby $x=0$, $f(0, f(0))=0$ is false, for the function of the function of x expresses an x-successor; this, for the simple reason that, $f(0, f(0))f(0)$ for on the left we obtain $f(f(0))$ and on the right just $f(0)$; so, $f(0, f(0))=1$ which makes it a second-order expression. As 01, a nihilistic or solipsistic view displays its own contradiction in its underlying structure.

The system represented by [1]–[4] can be inferred from the apparent deployment of particular expressions relating the objects that constitute our current state of affairs. Given a particular deployment of, say a description P, we can abstract its function of application. Assuming P only has functional-content, the function's determinate, its object, is some *p*-member of the state described as P. This is defined by the function $p=f(p)$. The determinate is valid when $p=0$, thus $(f(p)=p)=$P in itself. From here, if it is the case that for the state description P and its function of application *f*, if *f* then P given *f*'s application, in other words $f(f(p))=p$' or $P(x=p)$. We abstract that function in the following way. If it is the case that, if P then *f*, then there is an *f*, then there is a P.[20] This axiom is valid with respect to every interpretation. As a tautology, it forms the basis for our assumption that with every assertion there is an underlying function of application that can be represented before its being applied. In so doing, we reveal the embeddedness of our intuition, our implication in those contexts of assertion by way of the assertion made.

This system is satisfiable. Implied by each formulation is the statement: if for all *x*, there is a relation between *x* and itself, then for all *x* there is a *y* such that there is a relation that can be posited between *x,y*.[21] Suppose a domain (U) and posit a set of all its possible interpretations (I), the set of all those interpretations would not be a member of that domain although composed of its members. Thus, I=0 in U but labels U in total by referencing its means of construction I(U)=U. Now, say that we can enumerate the members of U. Even if comprised by an infinite series, from this we can determine a subdomain of U. That subdomain would be enumerable as well. Composed of U-members that subdomain in total is not itself a member of U but marks a particular interpretation that is a member of I. The relation between U's members and those of its subdomain expresses a function, an arrangement pairing the members of one well-ordered set with another. As an interpretation is expressed as a function of a relation between members of U, then the members of U are I-related and the relation between U and that subdomain express a function indexed to a particular interpretation under I.[22]

The function abstracted from an assertion within or about a particular context posits an explanation for how entities can be realized. The function whose operation produces the concept we seek exhibits recursive constructive capacity not only because of its product, which would stipulate that it produces the same output regardless of contextual input, but sometimes in spite of it. From this we can conceive of how novel expressions emerge in a context with and in spite of finite means. Understanding this function outside of its being made interchangeable with a preconceived notion of what counts as a concrete constituent of that domain's state of affairs, a change in self occurs because the input to that self-actualizing function changes. As such, the composite image constituting the reference frame of our state of affairs is not rigid but functional so as to stay appropriate to changing conditions. Navigating those affairs by way of propositions is possible because they are inferentially linked by virtue of that framework's functional-content.

The use of a particular function implies the deployment of a frame of reference. If a predicate F of something is traditionally read F of *x,* represented by the formula F(*x*), that reading implies *x is* (an) F. We saw above that F can be defined in itself by $f(x)=x$. The functional-content of the assertion composed by F entails that the form of life of the context in which that predicate was used is organized by that frame. Therefore, a description composed within and by what is available in those conditions does not have a significance outside of that form of life. For example, with inappropriate input, there is no output, and if there were, that output would be senseless

20) [if (if (if P then *f*) then *f*) then P]. See Church, *Mathematical Logic*.

21) See Gödel's completeness theorem.

22) For example, $I=U_0$ for $I=n+1$; thus IU; so if U_n where $n=1,2,3$ and U_i where $i=1$, U_j where $j=2,3$, then $<0, 1, 2, 3>$ implies the following relations hold: $<0_{I=U}<1_{Ui}<2,3_{Uj}>>>$. In other words, in U, $I=<U<U_n>>$ represents the function of an interpretation where a one-to-one relation can be posited between members of the domain U_n and those of U_i.

in the context of assertion much like a definition that contains terms in need of definitions as yet defined. The modes of expression utilizing this mechanism to produce that thought are indicative of an underlying subjectivity, formalizing a set of tendencies implying that particular form of life by way of its content, affairs/operations. These tendencies exhibit the recursive use of particular frame-dependent descriptions. Modes of expression present the possible modes of inhabiting the contexts those assertions construct, for example *x*=individual, F=frame, F(*x*) implies x *is* F. The subject producing those assertions inhabit and thereby participate in that context by way of making those assertions. Even if the same frame is being used, the composite of injective functions being itself injective, forms the basis for decoding expressions amongst the group, although certain operations are weighted differently due to the social and cultural embeddedness of and motivating a function's use. These composites produce output appropriate to context as well. This provides our window into positing subject continuity with respect to a collective improvisation via a look at intersubjectivity.

Changes expressed by an individual are proportional to or approximate a change experienced by/in a group given that individual's participation in the group in which the input for the functional-content of its expressions are constituted. In sum, participation, even in negation, provides the operational basis for that group's second-order functional-descriptions. Individuals can only be known as such in relation to a group. Even if it is merely stating what that individual *is* with respect to what it is *not*, that individual's expressions become the object of a proposition formulated from one's self. Otherwise, to posit one's uniqueness would be senseless. Therefore, the assertion of a self is a second-order operation positing different versions of that self, named so dependent upon context in which that assertion was formed. Or, that expression becomes the object of the proposition of another, forming a group between that self and an other whereby each understands their own predicament because of that relation, thereby constructing that group by way of intersubjective understanding (i.e. the injective composite functional-content), of their descriptions. Propositions composing individuals or between them constitute a network that expresses the group, even in so far as an individual denies the group, they posit a point at which they are not, proposing the conditions in which they are themselves before their method of asserting their uniqueness is applied.

As the composition of the frames organizing our interactions within states of affairs are had by a consideration of functional-content (e.g., F and, if F then G, then G composing a state such that F and/or G), the function of the propositions modelling the relation between our reasons for interacting, displaying our intuitions, become the way in which one assesses and goes about theorizing about their state of affairs. As we are talking about the way in which one is expressed, the content of these assertions come objects of our experience are functions themselves, working with what is represented by how one structures their modes of thought. The structure being the relation between the objects of those propositions, thoughts, about which they come to know their state of affairs. These objects are not present in the model projected but nevertheless the force behind it.

Formalizing the above, the function *g* becomes the interface through which *f*-assertions can be rendered valid or not. This posits a reference frame constituted between multiple individuals in which an intersubjective understanding of the application of the functional-content of assertions is obtained. We know where they obtain insofar as where they do not apply, (i.e., outside of that intersubjective framework). It so happens that *g*, a two-place relation, was shown to be derived from our initial assumption of *f*. For if F(*x*) implies *x is* F in so far as f(*x*), then if *x* is *f*-related to itself in F, a second-order formula can be deduced, $f(x, f(x))=g(x,x')$ – see above. Where $f(x, f(x))=x'$, we name this *x*-successor by the function *g*, (i.e. $g(x, x')$) otherwise contradictions ensue. In this way, *g* takes two arguments, one of which is the operation, if *f* then *x* given *f*. We can assume if not-*x* then *y*, (i.e. if *x* then *x* or *y* given *x* so $f(f(x))=y$). So, if $g(x,y)$ and *x* is not zero, then $g(f(x),y)$ expresses a second-order operation. This second-order expression is valid for it cites its means of construction, $f(x)$. Simply put, if F *is* $f(x)=x$, and F is not-G, so in G the function of F is 0, then F=F presents *f* 's determinate and an F-successor F'

is F_1. So, $f(f(x))=y$ is valid for a function of x at its zero is not interchangeable with *x* itself. From the function of that function we enumerate the members of G such that $f(x, f(x))=y$ so F, $F'=F_1$, $F_1'=F_2$, and so forth, each successor an object under G providing the underlying syntactic structure licensing G-assertions.

Reconsidering construction by way of conditionalization with respect to the contextually-dependent emergence of the opportunity to apply the functional-content of an assertion, functions can be determined before application. As "if/then" statements result in either a false antecedent or valid consequent given that the antecedent condition obtains, they quite nicely represent what functional application entails. Whether or not that function is applied brings into our account a modal argument. The mode of expression represents whether the modes by which the individual utilizing a particular function from their endowment can be expressed is dependent upon the context currently inhabited. The possibility of the second-order description is dependent upon the function applied being able to reference, as above, either F or any F-successor in that citational line. Once the initial context of application naming those conditions are defined, the modality of *x* is necessarily indexed to the possibility of building second-order expressions. Individual outputs come together to produce a composite image of the affairs in which those individuals are no longer mutually exclusive yet remain themselves. Otherwise, no output would result for no functional relation is sustained.

From this we claim the following:

There is an *x* such that (for all *x* (*x*=individual) such that there is a *y* ((for all *y*=group) of *x*))

A relation between the expression of an individual *x* and another *y* results in a *g*-related group. This formulation ensures that *x*=*x* and not another thing, averting identity paradoxes. Its relation to others is a function necessary within that context. The composite of *x,y* as a function of *g,* utilizing *x*'s output as input does not exhaust *x*'s expressive capacity. However, the expression of *y* is relevant because it is determinate; in other words, known by its function of application, *y*'s zero in *x,* its use is relevant in the domain in which *x* participates. Although quantified in *x*'s domain, *y* is not exclusive to *x*, for each individual retains this capacity. As the application of the functional-content of *y*'s assertion is indexed to this *x*-context, the functional input of another individual *y* is such that *x,y* can be *y*-related. In so doing, we also show how *y* in and of itself can posit a predicate that obtains outside of *x* for it can be defined at its zero, (i.e. (f(y)=y)=Y(0)). Therefore, *y* posited universally obtains either no one thing in particular, thereby merely positing a particular reference frame, or nothing at all.

The function of the operation of *y* indicates what type of group is being articulated, forgoing opacity troubles brought on by quantifying or stating that something is not itself in this context. The self-articulated is an object of that domain in the sense that in order to "know" it, it must be able to be manipulated within the conditions to which the context of its appropriate assertion was indexed. It is in this way that the functional-content of an individual's assertions can be actualized, for there is a context in which that assertion is relevant. The subject in itself is determined insofar as we know where the functions of its endowment do not apply. The instances in which they do not apply defines the determinate from which successors can be constructed and introduced into the subject's endowment so as to articulate a self that is appropriate within those conditions.

The function of *y* can be abstracted from the operation of *x* as distinct or alongside others. Returning to our determinates of individuals and a composite individual or group, we state: if *f* then *x* given *f*; so, if *g* then *x,y* becomes if $g(f(x))$ then *y* given $g(f(x))$. From here the self, represented as an injective function, is expressed, $F=[f(x)=x]$. The group in which improvisations occur, successor from that initial assertion, by way of the composition of the functional-content of different relations between conditions and the contexts they construct is

represented as: G=[$g(x,y)=y$] given that $x=f(x)$ and our definition of currying *[4]. A collective improvisation is expressed by an operation that moves from a many-one relation to a one-many relation, encoding infinite use of finite means in an object experienced as a finite group. From here, modes of expression as modes of inhabiting that context being a collective improvisation follows:

[5] if for all G, if G then F, then necessarily-F;
[5.1] if it is the case that not-G such that if F then (G and not-G), then possibly F

* [5] Intuitively it follows that not-necessarily-not=possibly and not-possibly-not=necessarily.

[6] if F then possibly F
[7] if, necessarily if F then G, then, if necessarily-F then necessarily-G
[8] if F then for all *x*, F, (i.e., F(x))

[8]* F(x) could be empty, applies no one where in particular in the domain indicated by the user. This is so because universal stipulation entails that F does not refer to a unique entity in the domain the user posits but to the domain itself. The user is indiscernible from the context of assertion. Implied in each assertion is its function of application, use indicates the reference frame of the one applying it.

[9] if for all *x*, if F then G, then, if for all *x*, F, then for all *x,* G

[9]* posits a domain in which a description obtains a determinate object other than the user. This could be some other instance of the user themselves.

[10] for all *y*, if for all *x*, F(*x*), then F(*y*)

[10]* states that the user is implicated in the domains in which its assertions are applied

In this way, we posit necessary and sufficient conditions for a connection between the expression of the first-order operations of individuals, whose function become the objects of second-order operations articulating a collection, by way of that group, of many expressions towards a composite goal.

Taking it to be the case that the statement: if *x* then *x* or *y*; is valid, the function of which expresses the operation of *g* above, if *x* then there is a function of *x* such that with that function we can apprise its expressed output just so long as it can be determined. Same with *y*. A system can be composed where F=[*x,y,z...f*(*x*),*f*(*y*)... valid/invalid] given that from the determinate of those functions within that domain an F-successor (F') can be constructed.

So, F'=[$f(x)=x$ … G(G=$g(x,y)$...) …*g*-evaluation] where F_1=F-successor. As F is valid, the function of the operations named as objects in F' express possible G-relations which are valid as well. In sum, the possible improvisations, "arrangements," in G are built up from the valid and relevant constructs from its underlying structure in F. We move from a universal relation between functions and the operation expressing values in that domain to applying various arrangements of those functions to articulate many possible groups from the finite members of the original domain. Due to there being more groupings that can be articulated than individuals in the underlying domain, this excess is what is captured by the concept of a collective improvisation. For example, even though the set of natural numbers is infinite, the set of even numbers is not itself a number,

although made from that domain's constituents, thereby representing an extension of the concept expressed by arrangements of that domain.

Moving forward, G maps a value over the length of stings of expressions produced from that domain constructing, (i.e., populating an F'). The relations between values exhibit the contours of a possible model of that domain. These models are what Brent Hayes Edwards in "Syntax of Scat" would call "prototypes" of possible improvisatory arrangements in that state. These can be actualized given appropriate conditions. By virtue of this constructive model, we capture the spirit of LeRoi Jones' idea of improvisation as the capacity to actualize the future, presently; what I have called poetic computation. In lieu of strict or base computation, this poeticism projects an operation from a domain of selection to one of composition. As only functions are curried through this projection, we are not necessarily composing entities but manipulating parameters in which certain expressions can emerge and others not. Think of racist terms' contextual dependency yet retaining the same functional-content indexed to conditions. What if conditions change?

Above, we hoped to formalize a system F-G such that there is a set of possible collective improvisations, distinct from others, given certain functional compositions within a particular cultural endowment, C. As the functional-content of these improvisations are indexed to the context naming the conditions in which their application is appropriate, when certain conditions emerge, these functions, determinate within that endowment, become available. In this way we proposed an explanation for how one encodes seemingly infinite possibility in finite means, whether it be a lexicon, brain, mind, digital, et al. As these conditions imply multiple aspects determined by which context of those conditions the user inhabits, a description C(F,G) produces the expressions qua content of that collective improvisation which is valid because the functions utilized to produce that expression co-construct a composite set of contexts articulating a new set of conditions in which that expression is appropriate.

If F is not interchangeable with F' because F'=G, then G(F)=F at F's zero. Thus, a group's endowment does not arrest individuals but contains operations as its objects. The possibility of mapping a relation between both is had by showing that F(F)=F' and G(F)=F'. Thus, F(F)=G(F), the function of the operation expresses the concept we seek. G assigns a value to the expressions of F by selecting which to apply so G(F, G(F))=F'. In this way, G is an extension of F because it is not interchangeable with any one member of F yet composed of its individuals. G is a prototype of a composite of individuals in F but whose members are G-successors. The system expressing a cultural endowment as a collective improvisation is expressed by the following proposition:

[11] for all f, F(x, f) if and only if there is an F' such that G($f(x)$, F) and if $f(x)$ then $g(f(x), y)$ given $f(x)$ and $x \neq y$.

The content of an individual's assertion is not empty just so long as for all expressions there is a function by which that expression was applied. This is known to be the case in so far as there is an articulation of a self that given the function of expression, the expression of another can be related in such a way as to discern between individuals yet make it so they are not mutually exclusive. The consequence of this being that if this were not the case, the world, as composed of these objects, would be empty.

Necessity is shown to be epistemically required for identity, but ontologically contingent. An identity's application is necessary dependent upon the determination of a possible domain providing the means of constructing that domain are available.[23] From this it follows that from what is possible, it is necessarily possible.[24]

23) Kripke Naming and Necessity.

24) See Barcan, Functional Calculus.

We see this because multiple groupings, not identical to each other, but somehow related, are produced. In other words, we do not want to over-extend the conceptual resources of one group to another as different arrangements of functional-content produce different ends. However, those groups are related because, at their zero, functions can be seen as different but not mutually exclusive for no output by which to discern their uniqueness, save for their being indexed to particular contexts of assertion, can be ascertained as of yet. Due to the above, the relation they obtain is represented as a zero in each domain, therefore the domains of each individual are related at and by their functions of construction.[25] Once produced, the arrangement is necessarily possible within that domain.

Even if an internally contradictory group is articulated, we can form a valid statement regarding this inconsistency. In other words: there is an *x* such that (for all *x* is *x* and (*y* such that (for all *y* is not *y*)), and *x* changes *y*). We posit a domain in which that inconsistency does not maintain. From this it is possible to negate that group by constructing a context in which it is true that that group is invalid. In so doing, we make it so that when that group is articulated, its functional-content obtains nowhere. On the other hand, if a group is negated in order to uphold an inconsistent order, the statement of that order negates the basis for its own assertion. The individuals therein are not void, but the order imposed is exposed as having unsatisfiable conditions. Thus, when we state that *x* changes *y*, the function expressed is that *x* changes the conditions so that the functional-content of *y* produces no object.

Necessity in context, therefore ontologically contingent, is expressed by this formula

[12] there is a *x* (for all *x* there is a *y* (for all *y*, x), in x)

which claims that,

[13] if *x* then *y* given *x*

[12] states that there is an *x* such that Y(*x*). The negation of Y does not negate *x*, only states that Y does not apply. In accordance with the above formulation, $f(x,y)=x$ only when *y* is 0, either at its zero whereby it functions as a predicate of *x* or it does not obtain in *x*. At its zero, $f(y)=y$ is not quantified outside of *x*, only in relation to *x*. The assertion of *y* is only necessary in *x* once identified with some object, here the function of *y is y*, but the name it is known under is dependent upon its being applicable to a member of subdomain of *x*. Thus, *y* is not necessary universally throughout *x*, only in the context determined as one in which *x* applies. As *y* is dependent on context, it may function under a different name, but its operation produces the same end. For example,

[14] if *x* then *y*, then, if *x* or *z* then *y* or *z*.

implies *z*(*x* or y). So,

[15] if *z* then, if *x* then *y*, then, if *z* then *x*, then, if *z* then *y,* in insofar as *z*. Therefore, *z* as a determinate of, "if *x* then *y*," is plausible. What is expressed is that *z* of *y* is a valid description of *y* that is imported into *x*, even if *z* states that it is true that *y* is inconsistent.

25) $f(x)=f(y)$ only when x,y are at their zero so $f(f(x)=x, f(y)=y) = R(x,y)$ because $f=f$.

The difference between the two statements can be outlined as follows:

[16] $x(y=0)=x$.

That is to say x is a valid determinate of y's inconsistency such that x labels the domain that is y which obtains no one where in particular. Or,

[17] $x(x,(z(y=0)=z))=(x,z)$.

The former states that y in x is not the case; the later states that z is a valid statement of y's inconsistency that is consistent in x, although z exhibits in its underlying structure y's contradiction.[26]

The completeness of first-order operations implying the capacity to build second-order expressions does expose that second-order operations can produce expressions syntactically correct but semantically undecidable. For example, "this sentence is false" cannot be proven true or false, even though structurally valid within the system. It requires another system taking this expression as an object which runs into the same issue. This should not worry us because group modes of expression cannot be semantically foreclosed, for they cannot be known as a totality, only by their means of construction. To be "true," then, is to be valid in the system and as a determinate of its function, can be defined and indexed to the context of its appropriate assertion. These group articulations, because of their incompleteness, can remain relevant to context as contexts change. The imposition of a totalizing group identity, resolute despite context, seems to be the dame quickly of this predicament. The imposition itself is contradictory upon assertion or empty for it obtains no one object in particular by which to justify itself. Held as the sole system, that system's reference frame cannot be shared. Resultantly, it has no access to the means by which its use can be validated. One can apply this critique to racial supremacist arguments as well as arguments evacuating blackness of its meaning. Here, blackness is a concept expressed by the function of its operation in the contexts of which it is apart. A totalizing effort will always be incomplete for blackness' full expression remains incomplete because it itself is generative-recursive. An object which by "definition" resists universal predication is yet formally determinate, as its operation can be formalized and thereby understood, blackness is still in the process of its articulation. A collective improvisation.

Taking language as an internal creative capacity to produce thought, collective improvisation provides a logic and syntax generating a semantic interpretation within various systems which does not arrest that which is emblematic of this very concept. Subjectivity is a recursive creative capacity. The function of this recursive capacity expresses a freedom in the domains in which it operates despite the overdetermination of its input or its being merely labelled otherwise. Blackness in the Americas accomplished this through musical expression which, historically, did not have recourse to notation or predetermined concepts for its justification. Improvisation,

26) It is important to notice that concepts are constructed and handled between subgroups of the domain. The application of that concept implies a reference frame organizing a particular form of life, a set of operations detailing a particular state of affairs. Otherwise, validation procedures, as well as justification for the application of those concepts, are hard to come by. As a result, concepts are not individual but known as such in relation to others. Even for the individual, the concept applied relates particular contexts over the history of that individual constituting the appropriate conditions of asserting what it is that concept claims. Application is licensed within a domain in which that concept obtains significance, (i.e., inter-subjectively understood). Otherwise, its evocation would be senseless. Consider the concept of trust. "So, you want to hang out with our group, oh gosh, sorry, someone in my group is not comfortable with that, I can't." This is how racism works as well, its expression is licensed by the function of a categorical term's operation amongst groups determining movement, membership, and access. Thus, an expression of the group is not held universally by each of its members because what the group expresses is the arrangement held between its members. Change the conditions, the function expressing membership to the group may obtain no one individual.

the utilization of distortion, syncopation, and so forth, allowed for an experimentation with finite means that produced output in excess of arbitrary stipulations of value or the borders of genre.[27] Improvisation is expressed by the function of an operation of call and response. The contexts of asserting certain phrases and, thereby, groupings are indexed to their conditions of appropriate assertion as a function of their determinate content from finite resources. Possessed by both producer and listener, the capacity to project an image whose functional-content bridges a domain of selection to one of composition becomes the object that in turn is input for the capacity of another. It is in this way that these functions are related to each other co-constructing a state's affairs from their respective endowments. The act of encoding individual changes and showing the possibility of decoding those propositions provides a model for the overall composition of our state of affairs. It offers what understanding à la intersubjectivity entails; why it is possible to create a thought in the first place; and from which semantic interpretations emerge. Even though the proposition may appear different on the surface dependent upon context, the underlying functional-content composing those phrases inner structure coupled with the shared capacity to both creatively encode and decode those expressions on both sides, allow for two functions to obtain the same object or the same object to be put to use to different ends. Understanding becomes an operation of feeling and thought, the second-order predicates and their attributed functional values represent an extension from that system.

27) See Rapport, "Punk as Blues."

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