

Articulation: Individuals to Collectives

Victor Peterson II

Institute for Advanced Studies in the Humanities, University of Edinburgh, UK

Abstract

This work illustrates the inner workings of a model set forth by Stuart Hall that analyzes how social formations emerge, interact, evolve, and dissolve over time. It treats social-cultural and political movements as complex adaptive systems and utilizes information theory to treat these conceptual entities as physical systems. In so doing, Articulation theory shows how relations of subordination and dominance emerge and provides a solution to how individual acts may harbor non-local effects on and within social formations.

Keywords: articulation theory, information theory, mereology, sorites, Stuart Hall

One of the main issues that arises in Articulation theory is how individual acts lead to group formation, affiliation, and polarization. How do group expressions indirectly describe individual acts and individual acts evolve into group activity? What if we treat collectives and their emergence and evolution as complex adaptive systems? Articulation theory studies how relations of subordination and dominance emerge, not necessarily the things that occupy those positions but the emergent relationship between the positions themselves. This gives way to a mereological problem, that is, how does one get from the individual to the group, from individual groups to collections of groups, and back? This paper will not go too deeply into any sorites sorts of problems, discerning the point at which a collection of individuals becomes a group. Issues such as those fall aside when considered in an articulatory sense, for an ensemble is constituted by an internal relation held between its members. Framed in this way, we will find that we can formalize relations as objects of study and analyze their evolution.

We will first explore the sorties argument against Articulation theory. Then we will be able to return to the mereological issue at hand. We will utilize Stuart Hall's encoding/decoding social communication model to show why sorties arguments dissipate when talking about how we move from individuals to groups to relations between groups. To do that we will explore the connection between Hall's theory coming to fruition at the same time as a reinvigorated interest in the resources of information theory. As these connections help us formulate the contention that information produces and sustains our knowledge regarding what is and what is not a constitutive member of our state of affairs, we will be able to provide a model of what emerges as an individually complex yet collectively simple system.

Sorites issues are interest-relative (Fara 2000). Our determinations are made relative to our interests, that is, they refer to a norm (=canonical type). This term might seem vague at the moment, but when treated info-theoretically, it will become more concrete. For now, we propose that the position of an individual relative to others can be mapped between axes of type-selection and use/application (=compositional) – semantic and rhetorical axes (Gates 1988) – that determine the canonical space containing that individual's modes of expression. An individual's position within that space is a function of their mode of expression between those axes. It will become evident that the content of that expressed position is functional, thereby giving us a way to model how formations within that space emerge, diverge, polarize, and/or dissolve.

A mode of expression is non-representational in itself as it produces representations. Modes of expression will be treated as an encoding/decoding mechanism. As, for example, not what comes out of one's mouth but what constructs the thoughts organizing and upon which phonemes are mapped. Formulated this way, encoding/decoding does not run aground on dualist notions for the system, and the mechanism, proceeds by concrete sensate cognition; cognition being the ability to convert analog experience into digital representations and project those representations to organize subsequent experience, updating those representations over time.

A brief statement on sorites issues, that is to say, at what point do we consider a formation of individuals a group, will be made so that it's clear that once two or more individuals are related in some way, they form a group and relations between groups give way to indirect effects within a system or constellation of groups. Issues of the sorites type revolve around the classical logical notion of transitivity. (Fara 2000)

for all x, y , if x is F , and there is a relation R between x, y , then y is F

There are many questions that arise from this that are only compounded when x and y are independent. If what counts as an instance of F is a case of what does or does not have that property, and the above makes that determination plausible, then how does one know the extension of F ? Where F does or does not apply? Is x a subset of y or are x and y the same or, if independent, at what point can we transition from x to y when considering what F is? At what point does the addition of one individual mean the extension of a group and at what point can we say that some individual was a predecessor in the process of articulating what we now consider that group? There is a way to formalize how we can have properties that reference vague quantities when the conditions of their application can be determined.

Conditions of use seem to be “attributable” to some implied canonical type, or “implicit comparison class.” (Fara 2000, 53) If it’s the case that if we encounter a property expressed by the function of the use of a predicate entailing the function of its application, then we can assume that the appearance of that predicate implies a determinant to its function of application. (Church 1956) That function can be abstracted. If some thing a is labeled by a predicate denoting a property F , then its function of application, what’s stored for later use, is Fx , not Fa . For if it’s the case that if a then an instance of F and, therefore, one has the concept F , then we can label, recognize, a and later instances of a as F . The ability to use F represents a clear-case of this function, relating conditions of application to contexts of expression in which each use obtains a functional-equivalence with the initial determination of those conditions. (see Fara on constraints, p. 57) We can treat the relation R functionally for, by definition, a function is expressed when

there is a feature x of a domain and a feature y of a sub/co-domain such that (x,y) is a member of the function f

That function indexes (=determines) a relation between a domain (=conditions) and subdomain (=context of application) whereby the relation R can be said to be the functional content of F . As such, the function itself is an abstract object and, therefore, can be the content of another predicate. As the object of the other predicate, the former acts as a name for the object present in the context described by that secondary predicate and in which one determines what is an F . If a function can be determined prior to application, we can test where and what is an F without having to know the full range of its application. The conditions of applying F are determined when domain and subdomain are the same, when f of x is x . This indexes the canonical type F , determining what counts as F prior to its next instance. When f of x is x , F is of no one thing as yet, save the conditions it names as those in which F is available for use. Now we can relate an individual to a property expressed by the function of that individual given certain conditions, what Fara indicates as the “interest-relative” explanation of our use of vague predicates. A context in which F applies, then, is one where there is a functional equivalence between x and some x -successor. As x and that successor are not interchangeable but functionally related, we can call that successor y , giving way to a definition for functional equivalence implied by that of a function. So,

if there’s an x of a domain and y of a sub/co-domain whose pair is a member of f , and if there is a pair between x and some y -successor of another sub/co-domain, then that y and y -successor are *functionally equivalent*, making that y -successor an extension of f , i.e. an f -successor or instance of F

This is key. We see how the same function produces different output and how the same output can be the result of different functions. As functions index their conditions of appropriate

application, the conditions indexed by F being a property of the objects it relates, then different objects can operate under the same property because the functional content of their expressions form a line of citation referencing the conditions determining they're being understood as F . So, if F is f , then $F_1 = F$ -successor, $F_2 = F_1$ -successor, and so on. No matter where we land in that line, referring to conditions of application – not to some thing but how that thing operates given those conditions – means that reference is secured as long as a functional equivalence obtains between the things to which that property is/was attributed. Sorites paradoxes dissolve as long as $(F \text{ and } x) \leq y$ then $x \leq (\text{if } F \text{ then } y)$, which is to say that if $Fx \text{ and } Rxy \leq Fy$ then $Rxy \leq (\text{if } Fx \text{ then } Fy)$. This in effect models a network of positions whose branches connect those nodes in a particular way and the location and extent of an expressed property within that network can be seen by way of those branches. An instance of y is an extension of the range of F as the relationship between x, y , given their functional equivalence, is implicit in that domain. So, when the pair is made, that pair becomes an object of the domain constructed from it. Therefore, when F is applied we test that relationship and update its range of application relative to that canonical type.

We return to the mereological interests of this paper. The foundations of Articulation theory set out by Stuart Hall (1980) utilized that term in regard to how ensembles come together rather than what counts as an ensemble. Articulation is a theory of evolving relations (=conditions) and the identities that emerge in those networks, not outside of them. The latter would lead to the reference vagaries implicit in the sorites paradox (Hall 1996). The encoding/decoding model of social communication that Hall (1973) develops mirrors the mathematical theory of information. As information theory allows us to treat information and, therefore, knowledge, as physical systems, Articulation theory provides a finite yet open model that can explain the formation and dissolution of phenomena which may appear under different predicates, names, or descriptions and yet operate similarly across contexts. We will see how individuals of different and changing dispositions can contribute to and sustain a collective formation across contexts while, within those formations, interacting with each other. Consequently, an individual (decision perhaps?) can have a non-local a/effect on others within the system both individually and group-wise.

How do we bridge the divide between individual and group without running into paradoxes or dualism? The encoding/decoding model states that one abstracts a relation between various features of their environment and encodes that relation – indexes it under some concept referencing the property of satisfying that relation of features – and projects that concept into subsequent contexts. When shared with others, or when the output of that action is returned to sender, that output is decoded in terms relevant to the receiver. For example, the concept of a face is not interchangeable with a single instance but encodes a relation between nose, eyes, ears, and so forth that expresses the concept of a face. This example is particularly useful since most all people have faces and yet each face looks different. As such, we can formalize how someone can “know” someone’s face. The concept of that face is an emergent property expressed by the relationship between its subject’s components. The encoding/decoding process automatically implies a limit to this procedure – a loss of information that will be explored below – that determines which objects satisfy that concept; what is significant, therefore meaningful, within the framework indexed by, and with respect to, that concept. In this way, that concept references a model that when a subject is asked a question regarding the world in which that phenomenon exists, they refer to that model to explain that concept. (Minsky 1968) Models, that is to say, “world-views,” index a position between use and canonical (=type-selection) axes. As one’s orientation in that space is a function of their relation to others, we can assume a yes/no disposition to others for explanatory purposes,

whereby either an individual is related to another or not. This shouldn't worry us too much for to be oriented away from a particular direction is to be oriented toward another. Thus, the set of dispositions index a particular orientation in space.

An encoding/decoding model helps us formalize group evolution as we can talk about individual connections by virtue of the extent to which encodings can be shared and that network evolves into group formations with respect to those individuals' disposition toward others without having to forgo the individual for the sake of the group. We can see why the latter would be alarming as race and racial prejudice can be studied as a function of group position. (Blumer 1958) Racialization becomes the process of making an individual metonymic with a group while predetermining that group position's value. From the above, we see how different individuals may have different dispositions toward the same object – apparently different while the relationship between them remains the same – and yet the relationship individuals obtain between themselves index a particular shape in which the extent to which that collective holds across contexts. The mutual information this group orientation shares across different instances allow us to say that, yes, internal dispositions differ yet a similar arrangement is obtained. Therefore, this formation is the same group. Indirectly, we see that different groups can also have similar orientations. From this, we can model dispositions under the concept of polarization, the extent to which an individual is turned on or turned off within the given circumstances.

Consider a collection of individuals where each must decide between two actions. An individual's disposition towards those options depends on the information it's received about that action. So, for a group of individuals, a subgroup chooses one option, gaining them access to a particular domain *A* whose benefit is a function of what they know given what they don't prior to gaining access to that domain; and another group chooses a safer option *B* for the unknown is less costly with respect to what's known to be the case. Polarization in the group is a measure of the rate at which the group is stretched toward different options, allowing us to determine the extent to which that formation coheres across contexts. This is to say,

the combination of individuals choosing *A* is a function of those not choosing *A* combined with the expected benefit of connecting with the unknown relative to what's known to be the case.

Those not choosing *A* index their baseline expectation, *B*. This sets up a measure of group cohesion with respect to individual disposition. Despite there being a safer choice, if one is turned on to a possibility by others because an expected sufficient number of individuals seem to be going that route, then it is worthwhile to do so for personal as well as group benefit. However, there are situations in which coordination may work against individuals. For if we are talking about a whole collection, then each indexed position had a prior possibility of $\frac{1}{2}$, that is, could have or could have not been accessible, prior to choice. Given their prior disposition, they would weight their options in different ways. An individual occupies both positions with respect to the current circumstance prior to that choice. A more appropriate mapping, then, is from the following:

Change in disposition is evaluated as the sum of pairs of individuals whose dispositions coupled with that of another insofar as the overall group is combined with the difference of the sum combination of individuals choosing *A* and those choosing *B*.

Individuals affect group orientation based on the disposition of others such that one's disposition corresponds to their neighbors in the network of which they are a part. Shifts in group formations, their convergence, coherence, and divergence – their emergence being probable, yet their connection being a yes/no determination – are mapped with regards to polarization within the group and with respect to others. Ising models provide a beautiful visualization of the above if we consider temperature as the mood of an environment—understood as the frequency of interactions between individuals, providing the information that sustains our understanding of one's orientation in space and time—affecting the polarization between individuals that causes the formation of groups and their relative positions. Access to what others are doing reveals how relations of subordination or dominance with respect to which modes of expression are licensed or not falls directly within our encoding/decoding model.

We are now almost able to treat the interest-relative account underpinning our study, but first, we must explain the connection between encoding/decoding and information theory. Information can be treated in physical terms as it's the measure of the reduction of possibilities with each decision made over a particular collection. A flip of a coin carries 1 bit of information as there are two equally probable options (=50-50) prior to the flip. To decide via a flip of that coin reduces the options to 1. This resembles the measure of entropy in physical systems. So if one encodes a concept as a relationship between features, that is to say, not 1:1 with each feature, and projects that relation or framework to see what objects in other contexts it captures, highlighting the features that are related in a similar way and selecting the object in which that relationship's satisfied, then that encoding is transmitted across a particular channel whereby the information that is received is a function of the reduction of all possible alternatives traveling through that channel to the object embodying the concept projected.

As such, decoding occurs when one receives output from what's been transmitted and then converts that information into functionally equivalent terms, terms relevant to the receiver. The hope from the source is that the information decoded is functionally equivalent to what's been transmitted. Thus, decoding is a re-encoding of what's received out of all that is travelling through that channel. The other possibilities, in addition to what was encoded, constitute an analog representation of information, a transmission that's continuous and registering only if over a certain threshold of some receptor designed to accept it that is socially and experientially calibrated over time. Hall would study the encoded concepts in news media which were transmitted innocuously because a norm in the channel for the source harbored injurious a/effects, when decoded by the receiver. The embodiment of those concepts or their disregard serves to fortify the channel itself and organize the populations to which that information was transmitted in accord with the structuring dynamics of the channel, maintaining a racialized state of affairs.

Information, however, can only be converted into knowledge relative to the resources of the subject, the encodings that that subject has both accumulated and adapted over time, and by which, when triggered, that subject organizes subsequent experience. That subject organizes experience by projecting some encoding into future contexts as a guide to action. The conditions highlighted allow or disallow certain actions. This conversion entails a loss of information despite a gain in the ability to manipulate their environment utilizing this capacity. An analog signal may carry +3 bits of information for 10 alternatives, however, if those alternatives are broken into two categories, each category only carries +2 bits of information, yet the decision to organize that information in that way directly attributes knowledge that is sustained by that information relative to the resources of that subject's capacities. A bit of

information held relative to a model that, utilizing a particular capacity, gives us the means to say in what respect that information is meaningful. The limit of interpretation tells us which model's concepts are of use to explain that phenomenon relative to others. Therefore, the capacity of that individual pulls from resources that are represented as a network of open predicates labeling those categories. These networks are at times called “schema.”

Above, we saw how a canonical type can be abstracted from experience. If a category labeled F is first attributed to an object a , encoding Fa , then according to the above, if we have F then we can recognize an instance of an a -successor given F . So, for subsequent encounters x , if we encounter an x such that we attribute F to x and mark it as an instance Fb , then we can understand, through prior abstraction, that that x , where $fx=x$ indexes F , is less than or equal to the domain characterized by that extension of F . Thus, if Fa then Fb . Fx is an open concept, abstracted from experience, that is updated over rounds of application. If the application of a concept to a thing was 1:1, that capacity's resources (=storage) would be extremely limited. However, if we abstract (=encode) the functional content of an object of experience, how and to what and where it applies, and project it to test its extension, we obtain a model whose applications updates over time. Our encoding capacity, whereby understanding is a function of application producing knowledge, grows exponentially. Models, then, become members of our world for they are the way we gain access to it. In order to produce an object to deny their membership in the world, one would have to resort to resources only afforded by the mechanism that allows them to make that distinction in the first place.

This brings us to interest-relativity. Information is characterized by the elimination of possible alternatives. Each decision contributes toward the average information provided by the entire ensemble of alternatives characterizing a context. Information provides the scaffolding with which we can attribute meaning to phenomena. It seems that knowledge, the ability to determine where concepts do or don't apply, requires uncertainty, information loss. A channel is that within the analog experience of stimuli of various amplitudes that do not contribute information; of that which we are certain.¹ These assumptions hedge or contextualize what is varying and therefore provide the channel through which we perceive the growth and dissipation of alternatives. For example, having an eye does not contribute to seeing as there are no alternatives with respect to seeing provided by not having an eye. To have an eye is to be able to see the variation between alternatives travelling through the medium it is calibrated to perceive, the information that is converted by an encoding/decoding capacity into knowledge relative to the resources embodied and accumulated (=composed) by that subject over time, making what's perceived significant within that system (=sight).

Different models determining the applicability of concepts pick out different relations and, therefore, operate over or constitute different channels. Like a cipher made of a sheet with slots in a particular arrangement placed over a body of text, when placed properly, that cipher (=model) only allows certain phrases to emerge. Functional equivalences across models held by individuals indicate group formations. As encoding involves what is known as equivocation, the information sent (=source information) with respect to that received, and based on the fact

¹ Information theory is based on the combination of the probability of an event's occurrence and how many binary decisions of that probable event it takes to eliminate alternatives so as to identify that event out of that ensemble. If p is that probability, and logarithm base 2 the number of yes/no elimination of alternatives based upon the probability of an event, then information is calculated for each event as: $p \log(p)$. This reveals a great deal for if for some probable event we have probability 1=certainty or 0=certainly-not-1, the $\log_2$ of either destroys information, for the former or does not contribute information for the latter. Uncertainty is required to produce information.

that decoding involves noise, indirectly proves the presence of a channel that provides the limit to what's considered meaningful or not. The measure of the extent to which a channel is maintained gives us, by virtue of the functional equivalences that arise, a model for how individual action leads to the direct or indirect emergence of group phenomena. The extent to which functional equivalences hold across contexts, if we consider their emergence a function of their mode of expression, gives us a way to model how individuals are related and how those relationships dissipate over time.

The measure for this shared, mutual, quantity directly relates individual to group expression and groups to groups in the following way. [1] If we have the probability of a particular expression obtaining a model indexing one's position within the state of affairs coupled with the rate of the reduced alternatives to that expression attributed whenever an instance of it arises (=predictability), then we have a measure of the amount of information that expression contributes to a group, that is, the meaning of that canonical type. [2] If we have a function indexing the conditions in which that expression is licensed, thereby labelling those conditions, the probability of that label, which for all intents and purposes is indexed to a model of those conditions, and that function obtaining in a subsequent context, measures our ability to predict what that model captures. Given the current ensemble of alternatives, what's captured obtains a functional equivalence with that initial index.² [3] It follows that mutual information between individuals, whether individuals or individual groups, constitutes a group even if connections are non-local. That information is carried by

the difference between the information that an individual X contributes to the canon and the information contributed by X given that of Y .

This is equivalent to the difference in the information that Y and the information that Y given X contributes, giving us the mutual information held between X and Y . That mutually held information indexes an emergent association between the two, the group. If this mutual relationship holds across contexts, we obtain a measure of the robustness of the affinities between the individuals constituting the group; if the relationship between individuals is non-local, because of a different set of dispositions within that state of affairs, the constellation of those relationships can be shown to be approximately maintained from context to context due to the functional equivalence of their modes of expression.

Group emergence by way of individual expressions occurs through functional composition that follows from our definition of functions above. The output of one function becoming the input for another function makes the output of the latter a representation, or image, of a relationship between the first and last domains. That image is represented in the first domain of its extension to the latter. Using mutual information and cross-informational measures by way of the functional equivalence of the concepts held between these individuals, the group constitutes a composite model of its components although that composite cannot be made interchangeable with an individual component. Thus, if a functional equivalence obtains between the output received from the projection of an encoding, those respective decodings being functionally equivalent reveals a relationship within and to a group that may or may not be known to the individual and yet that individual's output contributes towards the information of what that group is. This removes our initial worries. Individual but not mutually exclusive aspects can be constitutive of social-cultural and political formations. Utilizing information theory to

² This is calculated as cross information. $p(s)\log q(s)$, where p is the probability of a labeled event occurring and q the prediction of a functional-equivalence between instances of that event.

formalize Hall's encoding/decoding model allows us to discuss interest-relative concepts by way of the polarization – the dispositional relation that obtains between individuals – constituting the overall orientation of a group, providing information on group relations, both internal and external, as one system with various sub/co-components. Groups can be related or not but remain components of a global model of a state of affairs.

One example of this process comes directly from the study of race and racialization. Historically, if blackness is necessarily a global phenomenon – considering the circum-oceanic networks of slavery and colonial extraction – how is it that we have different concepts of Black identity, operating under different names, yet each instantiation of blackness can be held functionally-equivalently, but not interchangeably, while remaining, as James Baldwin once said, very “Black”? The source's projected identity is decoded in terms relevant to the conditions and resources available at the receiving domain. We find that the racialization of that label occurs as a function of how it is applied with the particular expectation of capturing certain populations (=cross-information). Yet, as it is applied, that label is updated given the alternatives it encounters. As such, these identities obtain a functional-equivalence over time, whereby various labels operate in the same way despite different contexts and the presupposed meanings associated with each label. Although different contexts, the relationship between its features, the conditions, hold. The content of that canonical type is expressed as a function of its use, indexed to the conditions licensing its use. This means that no one label of that ever-growing collection of identities functioning to express an aspect of Black-ness can circumscribe the whole although each references the same initial conditions. The mutual information held across contexts means that blackness can be known under different names yet be related and maintain a “Black” form of life despite acting on each other non-locally. It is in this way that we can formalize a notion of diaspora, a concept in which a group can be known in excess of any one locale or label and yet retain a mode of expression across contexts whose outputs, though different, obtain a functional equivalence expressing a complex composite concept with each other.

Another example comes from movement building itself. From our analysis, we can track patterns of resistance to legibility within a channel and/or the cooption by that channel of modes of expression. Cooption occurs when/where expressions are rendered as not contributing information, thus being made a component of the channel, that is, a socio-political and economic structure, filtering what contributes to the state. We find that polarization through these channels, the direction of the flow of information between individuals, and groups, is a good measure of how relations of subordination and dominance are being negotiated, even if causation cannot be directly determined. Consider a global conception of blackness forged during the Bandung Conferences in the mid-20th century. This movement, aligned to neither Soviet communism nor capitalism, was comprised of 29 countries not necessarily connected by land but by orientation so as to negotiate what represented a Third World of possibility. The collection of individual states was able to effect non-local change through their relationship to each other, not their proximity. This can also currently be seen in the proclaimed networked or “decentralized” structure of the Black Lives Matter movement.

It's the ability to move from node to node in that matrix that expresses the extent to which we consider which nodes in a global array are members of the same ensemble. Considering connections between nodes in a tree-like structure, where each node is connected through some branch, a measure of transfer (=communication) between nodes, then, can be treated info-theoretically following the logic from our introduction. For a global distribution of nodes N , $(x \text{ and } n_1) \leq n_2 \equiv x \leq \text{if } n_1 \text{ then } n_2$. The transfer of information is found where

if t =information transferred (=movement) and $X(t)$ and $Y(t)$ are two nodes whose disposition towards others changes over time, then T from X to Y is the difference between $I(Y(t))$ given the change in past disposition of X and $I(Y(t))$ given the change in disposition of X and Y)

From this it's apparent that if $x \geq N$ our analysis would fall prey to the logical fallacy of affirming our consequence, that is, searching for what affirms the channel rather than modelling what flows from node to node. A movement from node to node composes a relation between nodes. Movements, and the information they carry, are distributed. The above merely states that a movement is expressed as a function of its past trajectories. This also means that it can be expressed in unexpected ways as the abstraction of the concept through which we monitor it is based on the past. Given prior input, the output is made relevant to current conditions, yet remains functionally-equivalent to past iterations. (Pilkiewicz K. R., Lemasson B. H., Rowland A., et al., 2020) The same movement can appear differently dependent upon where it has travelled and the resources there. Connecting to our previous example, the notion of diaspora is not indexed to some geography prior to its expression given some chosen past trajectory but is about traversing geographies.

In sum, functional equivalences provide a measure of group cohesion. Polarization gives us the rate of dissipation as well as the turn towards alternative formations. Our model allows us not to have to worry as much about cataloging each and every aspect of a context by encoding and summing subsets of those framed conditions to see how much information enters our model as a result of that encoding's implementation. That process may prove inexhaustible, we may never find continuities. Subjectivity operates associatively, poetically (Moten 2003), therefore, relationally. (Glissant 1997) As functions can be considered abstract objects, we can treat relations as objects of analysis without having to reduce them to singular instances. An ensemble from a collection is not a thing in that collection but composed of its parts, thus representing a necessarily possible extension of that collection that was latent until actualized, articulated, presently. These ensembles can then be associated to compose more complex ensembles that reference their means of construction; otherwise, their formation would not have been possible. The effect is a deepening of the collection as we extend the range of expressions that emerge from it. All one needs to know is whether the information generated has increased or decreased, whether there is equivocation over contexts, from domain of selection through a function of projection to one of composition with, translation to, others, that is, poetic computation. If given the information received, does more or less information allow some alternative to arise? For example, to live on such street in this city in such and such country vs. to live in this city in this country. The latter carries more potential information because it is less specific yet captures the concept, but the former is an extension of the same domain.

So if encoding/decoding capacity is about the projection of models framing states of affairs and what it articulates is the amount of information able to be re-encoded by the receiver, setting limits on what we know about a state from their position, these limits are what Hall's theory claims marks what is significant or not with respect to our reading of that state, relative to a channel, model, or structure. A channel is chosen in order to organize experience; however, it quickly becomes apparent that selections determining what can or cannot contribute indicate the mechanism organizing the state itself, proving a hallmark of Articulation theory. Articulation is the study of how relations of subordination and dominance emerge by virtue of which modes of expression are licensed or not. When no information is received, this does not mean that it was not transmitted, only that a structure is in place that may be blocking it. We

cannot know that nothing was sent for information produces knowledge that encodes only a subset of the total amount of information possible. So even though we can't determine what is known, only what can be, our model is fine because we can still show how information might be transmitted without predetermining its content, which is what we wanted to avoid in the first place. In articulatory terms, we wanted to avoid overdetermination. Overdetermination is exemplified by a choice in channel that, regardless of what's transmitted from some source, that channel determines that nothing is received or that whatever information is produced is of no value to the source, only to the one that selected the channel. This provides a model for appropriation. As content is functional, that is, it maps a relation between domains of encoding and projection to those in which decoding and composition occurs, we obtain a model of movements that bridges the individual to group gap and a way to ascertain individual operations in relation to the noise generated by the channel. The meanings of vague boundaries of groups render, by their movement (=transmission), the truth conditions of the expressions composing them. These movements are sensitive to the channel through which they flow, that is, our interests. As the degree to which a group across contexts might change, with group affiliation and divergence being significant to the speaker, the interests of the speaker evolves, changes, and adapts. There is then a necessary possibility of the extension for what that group means within the constellation of groups composing our state of affairs.

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Corresponding author: Victor Peterson II

Email: petersonv@gmail.com