Abstraction, Concrescence, and Identity in Descriptive Metadata

Erik Radio

Office of Digital Innovation and Stewardship, University of Arizona Libraries, Tucson, Arizona

Abstract

Descriptive metadata is affected by the challenge of using language that is resilient to semantic transformation over time. Yet part of this is directly related to a bibliographic rift between between abstract and concrete elements. By exploring the materiality of information objects and how descriptive values are subsequently derived, ideological formations and their impact become apparent. An examination into the origins of abstract elements demonstrates their identitarian tendencies and the effect on conceptual organization. Alternatives offered by negative dialectics and critical realism are explored towards a different model of information organization and retrieval.

Main Text

Language is an evolving matrix of combinatorial signs and patterns. Its protean nature creates a challenge for situations where its continued coherence is necessary for it to convey information widely and in perpetuity. Metadata, as aggregations of signs, is affected by this problem, which takes on increased complexity when considering its potentially global audience. Using a language for describing objects that is clear and

resilient to semantic transformation is a critical endeavor. To accomplish this it is necessary to determine which metadata elements in a particular standard lend themselves to sustainable data values.

Another challenge impacting description is the use of 'neutral' language, or one that different interpretants can agree on as being an accurate description of an attribute of the object. As the debate on the use of 'illegal alien' as a Library of Congress subject heading demonstrated, language and description can quickly become political (Peet, 2016). While a lack of bias in description is unattainable, striving toward more neutral language remains in many cases a valuable effort for reasons that closely parallel those pertaining to sustainable data values.

The problem of language in its mutability, bias, and overall utility in object description is at root one concerning the phenomenological nature of the language that is transformed into metadata values. This article argues that the values schema elements' prescribe can be divided between abstract and concrete values, and that this divide accounts for many of the challenges described above. Applying ideas from process philosophy and critical realism, it will be demonstrated that concrete values, or those empirically derived from the object, provide a larger degree of utility than abstract values which are ontologically separate from the object and which contain identitarian tendencies that inhibit new models for conceptual organization. By reexamining schemas' tendencies towards one of these types of metadata, greater diachronicity can be achieved for those values that derive from concrete aspects of information objects as opposed to the more synchronic nature of abstracted qualities. More importantly,

identifying the role of identity thinking in bibliographic practices, specifically

classificatory projects, in enabling ideological functionings will serve as a foundation for

moving towards different, nonclassificatory approaches to description.

Process, Objects, Language

Change is a defining feature of reality, though the rate and nature of change is varied

among objects. For process philosophy change is the ontologically definitive feature of

existence as contrasted with an interpretation of objects, or substances, as static (Seibt,

2012). Being is ultimately dynamic. Understanding reality this way requires a different

interpretive lens for understanding objects, their perceived permanence, and what this

entails for quotidien activities. Specifically, how does this affect the language of

descriptive metadata and their use/interpretation over long periods of time?

To properly reframe the changing nature of objects, it is useful to understand

them as ontologically flat. According to DeLanda (2002), a flat ontology is made

'exclusively of unique, singular individuals, differing in spatio-temporal scale but not in

ontological status.' By contrast, a hierarchical ontology is one in which each level

represents a different ontological category (e.g. class, subclass). The idea of a flat

ontology has ancient origins, but a renewed interest in process philosophy has

reinvigorated it in common discourse.

Process philosophy contains several implications for understanding the

difference between abstract and concrete values. One of these is the singular aspect of

being, or what Deleuze (1994) calls its 'univocity.' Instead of categorical distinctions between objects, everything is considered an event. For Whitehead, reality consists at its most fundamental level of *actual occasions* or *entities* (Shaviro, 2012). He describes them as

> ...the final real things of which the world is made up. There is no going behind actual entities to find anything more real. They differ among themselves: God is an actual entity, and so is the most trivial puff of existence in far-off empty space. But, though there are gradations of importance, and diversities of function, yet in the principles which actuality exemplifies all are on the same level. (Whitehead, 1978, p. 18)

An *event* consists of at least one or more *occasions.* When *events* become contiguous in space and time, or relational, they eventually form a *society*. Whitehead also refers to *societies* as *enduring objects*; an interpretation of objects as durations of relations rather than static formations. Rocks, humans, bytes, and clouds are all *enduring objects* for as long as the relations that hold them together persist; in other words a concrescense. In Whitehead's ontology everything resides in a continuum of event-hood.

Language is a complex type of *enduring object*. Its processual nature as an event is the aspect that affects its ability to signify consistently and in perpetuity. The process of signification that is partially enacted by a term is fully realized only when an interpretant is present to make sense of it as a sign. Since interpretants differ, semiotic events are never fully identical. A term's ability to be synchronically and diachronically consistent as a signifier is its semantic longevity. However, it is important to note that a

term's semantic longevity is not determined equally by its existence as an *enduring object*, except in cases where it ceases to be an object at all. In many cases its longevity will be substantially shorter than its existence as an object. For example, until very recently the semantics of the Voynich Manuscript's language has been lost, whereas other terms like 'garland' have semantics that fade and reappear but as something else entirely. The difference between those durations is one that can be analyzed profitably by exploring the ontological distinctions inherent in processual thinking.

Enduring objects emerge from the pure potentiality of *eternal objects*. As Robinson (2006) describes it, *eternal objects* are indeterminate, passive, and ideal structures that undergo various forms of processing to become realized in the world. Whitehead describes them as reservoirs of pure potential (Whitehead, 1968).It is useful to draw parallels here with Deleuze's *virtual* and *actual*. The interaction between these two realms is nuanced. Every *enduring object* '...is double with one part implicated in the fully determinate content of the virtual and the other explicated and receiving actual determination without either half resembling the other' (Robinson, 2006). The virtual is a continuing potentiality of actual multiplicities. In this role it has the capability to condition the interpretations of objects in a way that is separate from actual manifestations.

Virtual/Actual Semantics

Semantics play a complex role in the ontology of the virtual/actual. An actual

object has semantic potential that is determined by its relations with other objects. The process of signification is itself an actual object, as the signification is materialized in the interpreting object. As the reservoir of multiplicities, the virtual informs this semiotic process indicating that meaning, while partially structured by actual objects, is mutable and perpetually new even if it remains similar between interpretants. In other words, in no case can an act of interpretation be fully identical with another, just as no two objects can ever be totally identical.

The form that a sign takes has a significant impact on its semantic longevity. Or rather the actualization of the sign directly affects its capacity as a consistent signifier. For example, the assemblage of components that arises from *occasions* to become the vocalization of a certain word has a much shorter lifespan as an *enduring object* than the same word etched into stone. In a pre-material sense whether the sign is represented as an icon, index, or symbol will also affect its semantic longevity. A sign's relation to its vehicle is not always proportional; a sign may only represent a single quality of its vehicle (Peirce, 1955). Fortunately for the current discussion the question of the nature of the sign can be mostly evaded as metadata consists of signs expressed through the vehicle of language and as such are symbolic.

Semantics, like all objects, are events. Or rather, the production of meaning is an event that is constituted by actual events. While the virtual provides the form and quality for the actual, it is only in the actual that semantics become concretized as vehicles of signification (Hooper, 1942). As *enduring objects* they morph as symbols for interpretants. As Peirce (1955) explains,

Symbols grow. They come into being by development out of other signs...or from mixed signs partaking of the nature of icons and symbols. We think only in signs. These mental signs are of mixed nature; the symbol-parts of them are called concepts...In use and in experience, [symbols'] meaning grows. (p.115)

Semantics, then, are a type of mental event. While the sign-vehicle will have some physical instantiation, the meaning it produces can only exist as a product of mind. While the question of the materiality of mental processes is worth pursuing, for the purposes of the current discussion it is enough to accept that while the virtual conditions the form and quality of the actual, it is only in the actual that semantics are produced. However it is the interstitial area between the virtual and the actual, the intensive, where events *endure.* As Faucher (2014) explains,

Once a document is actualized...it is only the expression of a partial object which gains in content as it is networked with its environment, leaving 'untouched' the unused potentiality that is carried in it. (p. 515)

Understood in this way we can say that language, while interpreted in certain ways in the present, carries a part in it, the intensive, which is continuously shaped by the virtual as its semantics unfold. The implications of this model are tied to the vehicle in which information is conveyed, or where semantic content of an object is produced. It is

necessary to "'surrender to the document and where its materiality, itself an assemblage and a part of assemblages, leads us" (Faucher, 2014). It is precisely in this materiality that one finds first traces of the rift between abstract and concrete elements in metadata.

Materiality and Ontological Primacy

Objects, as assemblages, do not emerge out of nothing. When a book, image, dataset, or other resource requires metadata of any kind, it has already gone through a system of processual interactions both cultural and technological that have shaped its present form. It is often at this point that the act of metadata creation begins; less common is it for metadata to be created in advance of the object.

As a semiotic object a resource conveys information about itself through a variety of material signs. Here it is not meant only by the inscription of a title on a physical book since digital objects contain similar inscriptions that are enacted to form the representation that is viewed on the screen. The question revolves around what kinds of signs are present in an information object and how are these consequently structured as metadata. Further, what functionings are behind metadata values that do not derive explicitly from the materiality of the concrete object?

It is useful to return to Peirce's categories of signs. A sign is *iconic* when it in some way reflects its object by similarity; for example, an orthodox church icon. An *index* has no significant resemblance to its object, but directs attention to it, like a weathervane.

Finally, *symbols* are signs that represent their object because of a rule informing its interpretation; language is made of symbols. While Peirce's categories are more granular than these three, they provide the necessary framework to examine the material semiotic of information objects.

There are two types of signs that convey information about an object. For a monograph these signs indicate that it is indeed a monograph as well as aspects of what it contains. First, it is identifiable as a monograph through cultural conventions, though parts of this may vary, like the positioning of the binding. It is through repetitive actualizations that the monograph becomes recognizable as such, and it is the generative nature of the virtual that defines the conditions from which it is actualized. The type of signification that draws one to the conclusion that an object is a monograph is peculiar. It is referential in that it is only with a prior knowledge of monographs that the meaning of 'monograph' as such is conveyed. It can be argued that the material aspects of the monograph that inform about its characteristics are iconic; it is through a similarity to like objects that the sign is conveyed.

The other type of sign that is used to identify the particulars of the monograph is primarily symbolic. Language, inscribed on the object in positions usually defined by cultural conventions, delivers that type of data that is central to basic retrieval, e.g. title, author, publisher. This mix of symbolic and iconic signs is what enables the basic act of understanding the object's nature. However, the nature of an object cannot be neatly aggregated into one ontic plane without consequences. The question of what the object is *about* is an ontologically separate matter that centers on the difference between

signification and interpretation.

The virtual/actual axis affects the nature of the signifying event. When a monograph is actualized the virtual no longer has generative power over those signs that inform about its nature. They endure in their material manifestation as distinct elements of an assemblage. The interpretant understands them as corresponding to particular features common to similar objects. Accordingly they can be translated into structured data. Signification can be understood as happening on a level of Secondness, or what Peirce describes as 'facts' or 'thisness' (Peirce, 1955, p. 90). Their availability is concretely manifested.

However, other types of bibliographic information that are commonly documented in schema are not as concrete. Elements like 'subject' and 'genre' instead belong to the realm of Thirdness which is where signification transitions towards interpretation as a defining quality. A monograph's material signs do not usually convey aboutness (excluding, perhaps, artwork on a cover); instead it requires an act of interpretation for these elements to determine appropriate data values, often in alignment with other conventions. But it is not the actual that informs this process; the virtual again comes into play as a part of the interpretive process. Language as a symbolic sign conveys the aboutness to the interpretant, but this is never fully identical between individuals. The virtual informs this process since aboutness, which derives from the inscribed, material text, is itself not a material manifestation of the object, but belongs to the interpreter. It can be argued then that concrete elements have an ontological primacy or immediacy over their counterparts that stem from the interpretive act. Metadata derived from

interpretations can be understood as being abstract in nature, or conceptual.

Bibliographic Rift

That metadata elements fall across a phenomenological spectrum including both materially concrete and interpretive data is not surprising. The question that must be explored is what effect the rift between those concrete and abstract elements has on the representation of the object through metadata. This bibliographic rift can then inform those elements that are more temporally durable. But the effect that abstract data values has on representation must also be investigated in order to determine if they enhance a descriptive record and at what cost.

Acknowledging that exceptions may exist, the top-level MODS elements could be separated into concrete and abstract elements as follows:

Fig. 1. Concrete and Abstract MODS Elements

Concrete	Abstract
titleInfo	genre
name	targetAudience
typeOfResource	note

originInfo	subject
language	classification
physicalDescription	relatedItem
abstract	
tableOfContents	
identifier	
location	
part	
extension	
recordInfo	
accessCondition	

The argument could be raised that a field like *language* requires interpretation in those cases where it is not explicitly labeled on the object. However it can be countered that the language is on a lower plane of inference than a *subject*-- the language of an object is a sign with denotative immediacy. Another objection could be raised with *part* in those circumstances where the object's position in a series is not explicitly inscribed on it. This, however, is when an object's semiotic or material network is valuable, as all objects exist in relations to others. As Latour (1996) explains it is semiotics by 'path building or order-making or creation of directions…[which] gives to all entities...the reality, solidity, [and] externality that was recognized in things 'out of' our

representations." In other words the tracing of the relationality from one material object to another, which, while variable, still holds a greater durability than to abstractions. This is also true of *accessCondition*, where a concrete document or statement can be said to have a semiotic relationality to the resource to which it applies.

An objection could be made that in this current model it would be impossible to make metadata for resources like photos as very little of what would constitute descriptive data is actualized on the image. Here 'path building' is vital for understanding how one uses not only the signs inscribed on the object, but those that constitute what may be called the object's semiotic network. For example, a photograph in an archive is more than those components that comprise its physicality. Its placement in a labeled folder, in a box, in a named archive all constitute material facets of its contextual, semiotic environment and which is what makes any sort of meaningful description possible.

The boundaries of a semiotic network are blurry. If desired it would be possible to connect any object to another through some sort of path building though there would of course be limitations concerning the utility of such a method. There is a gray area at which the boundaries of a semiotic universe begin to dissipate in their meaningful relationality to the object in question, and so there will often be a judgement call needed as to the value of including a separate physical actualization as a part of the metadata for a resource. This is not the same as the difference between a virtual and actual data value as they are all data derived from actual entities. The process of path building may seem virtual, but it is a path delineating relations between actual objects through which

material signs indicate the way.

Virtuality and Identity Thinking

The actuality of material signs on an information object is critical for enabling basic retrieval. As early information retrieval experiments discovered, only a small subset of metadata fields are required to fulfill most information seeking tasks (Svenonius, 2009). That these elements are widely available on the physical object, or at least available through a small amount of path building, highlights their ontological primacy.

The role of those elements that are not material manifestations but instead rely on the interpretive act, drawing primarily from the virtual, requires an examination to determine the value they provide and at what cost. By using an exemplar of a virtually derived element, *subject*, it can be demonstrated that the use of these types of elements incur several costs both in time and labor but also more critically in ideological framing. The following examination wishes to engage a reconsideration of their use and value of virtually derived elements for certain contexts.

Time and Labor Cost

Subject terms are commonly used in bibliographic records as a way of colocating resources that share a similar content focus. Gross et al. (2014) demonstrated that in keyword searches more than a third of retrieved documents are lost when subjects are

not present in the record. Similarly, Garrett (2007) expressed that for various search environments, particularly historical collections, users rely on the presence of subject terms matching to their keyword searches, and that subjects provide important terms that otherwise would not be in the record. Subject searching was also identified by Krikelas (1972) as one of the major tactics used in navigating a catalog.

However, the benefits of having subject terms present in records does come at a significant cost. As Zavalina (2012) has noted, determining the aboutness of a work is 'an especially challenging part of subject analysis, as each indexer might have a different interpretation of author intention and prediction of possible uses; moreover, these interpretations and predictions can change over time.' The variability of interpretations cannot be overstated. Just as words used in other decades have had their semantics change over time (e.g. artificial, villain), the gulf between interpretations of an object over a period of time can be even more drastic. Similarly, what may be considered 'neutral' language in one context may not be true in another. It is the role of interpretation in assigning subjects as opposed to the documenting of the physical characteristics of it that lend subjects and similarly abstract elements a reduced degree of semantic longevity. As such it often requires periodic and time-consuming remediation work. Similarly, for another distinct type, zines, scoping subjects chronologically, regionally, and socially provides more sophisticated retrieval but at the expense of widespread utility and an even shorter semantic lifespan (O'Dell, 2014).

Problems concerning the possibility of determining aboutness are prominent in current theory. In a detailed discourse Furner (2012) explains that there are essentially

two approaches to addressing the appropriateness of what he terms 'subjecthood'. The *nominalist* view posits, among other things, that subjects are not properties of works, but are known relationally (or constellationally as described below), do not exist independent of human thought and action, and are not determinable through any sort of repeatable procedure. By contrast, the *realist* view argues that aboutness is a property predicated on classes of works, subjects do exist independently of humans, and that aboutness can be analyzed procedurally. However, there is a third view, *critical realism*, which proposes that while humans create the structures within which certain statements like aboutness can be made, they are a product of conditioning elements that occur on a deep, generative level. The implications of this view suggest that while subjects exist as the output of social conditions, that particular environment is susceptible to change in a way that concrete objects are not. Or rather, as Wilson (1968) states, subjects are indeterminate abstractions while physical, or material objects, are "determinate in every respect."

Any sort of classificatory project is bound to be incomplete. As Bowker and Star (1999) explain, 'there is no such thing as unambiguous, uniform classification system...no classification system can reflect either the social or the natural world fully accurately.' Given that incorporating subject terms and ensuring their currency with contemporary language into metadata is a complex and time-consuming task, it is a cause for concern that the end result, even with improved retrieval, will never be entirely reflective of the resource it is referencing. Further, the use of subjects enables ideological functionings. The question then must be if this has a detrimental effect on

information organization objectives that outweigh the benefit of their use.

Identity Thinking

Subjects, genres, other classificatory/abstract elements can be considered virtual as they are rarely inscribed on an object and require a degree of interpretation to be assigned. While this has enabled certain types of retrieval, it has come at the price of silently framing information organization in ideologically compromising ways. Adorno equated the classificatory project with what he called *identity thinking*, or a way of knowing an object through classification (Berry, 2014). As Jarvis (1998) explains:

...there is an element of untruth in the very form of classificatory judgement itself. When truth is conceived according to the model of such judgements the concepts become purely classificatory, merely the common denominator of what is gathered under them. The objects become merely illustrative, of interest only as examples of the concept. (p. 166)

This reification of the concept, itself a virtualization, indicates that aboutness is about what something 'comes under, of what it is a representative of an example, and what therefore it is not itself' (Jarvis, 1998). The contradiction between description of the object and the use of terms that are not actually reflective of the object provides a dialectical tension highlighting the insufficiency of classificatory systems (Berry, 2014).

Practically this is manifested through subjects allowing for greater recall, but it comes at the compromise of possibly inaccurate precision.

This contradiction exists for ideological reasons. The goal of enhanced retrieval and greater retrieval of documents is in line with Enlightenment trajectories that are positivist in their regard to information. As Morozov (2013) explains,

More information is always presumed to be better than less; having more ways to analyze the same piece of information is always preferable to having fewer ways. Legal scholar Julie Cohen calls this set of attitudes "the information-processing imperative" and argues that it gives rise to a mind-set that equates information gathering with a "single inevitable trajectory of forward progress. (p. 86)

That the rise of Enlightenment era positivism is concomitant with that of capitalist commodification hardly needs pointing out, but it does demonstrate the particular ideological framings in which bibliographic description has been shaped. Of central concern is the existence of these false positives that virtual elements create through identitarian thinking; an aboutness that is concretized by identity rather than affinity.

Constellation

If classificatory and other virtually based elements can be accepted as controversial or compromising, the question turns to what an alternative method of organizing

information objects is possible that mitigates the identitarian problem. One such direction can be found in Adorno's concept of the *constellation.* Though discussed with relation to the methods employed by philosophical discourse, constellations can be usefully applied to the current investigation. Since concepts are inadequate to fully express the substance of an object, it is only through combination and reference to other concepts that the relations through which an object is internally constituted are expressed (Martin, 2006). These constellations of concepts form what Adorno terms *models*, which enable a way of knowing an object relationally instead of by example. As Adorno (2006) explains, "The unifying moment survives without a negation of negation, but also without delivering itself to abstraction as a supreme principle. It survives because there is no step-by-step progression from the concepts to a more general cover concept."

By not progressing to a larger concept, they remain in constellation through affinity rather than identity. In other words, 'a likeness that resembles the object, but without mistaking that likeness for the object itself.' (Martin, 2006) The mediations that can happen between a subject and object, as a temporal process, multiply meaning in that each individual mediation is joined to the larger constellation that the object connotes (Alcoff and Shomali, 2010). The non-exhaustive nature of the constellation, or its networked concepts, highlights the nonidentity of the object, or rather, its capacity for further interpretation through dynamic mediation; its temporally renewed potential. The constellation of an object as a collection of mediations always trails behind the object; "the essence is always historical" (Adorno, 2001).

The rift between those concrete and abstract elements very closely resembles the relation between an object and its constellation, or interpretive mediations. The constellation is extremely valuable as a record of historical processes, but ontologically it is at all points separate from the object. When they are understood as separate the constellation is valuable in generating a sphere of connotation that the object has created, but which doesn't progress to the level of identity. But as it has been demonstrated, when elements of the virtual constellation are materially manifested as the description of the object, the process of reification in effect banishes the constellation and identitarianism is ushered in.

How is the best way to accommodate the value of the constellation while avoiding the impulse to actualization and so create the false synthesis of object with interpretation? Bhaskar's notion of negation, closely related to Adorno's, suggests that objects cannot be reduced to our knowledge of them because 'what is inevitably enacts resistance against our knowledge.' (Gillman, 2016) Similarly, while objects and concepts (or constellations) are linked, they remain autonomous. However, it is through the dialectical tension between what an object is and claims to what it is that its ontological substance can be elucidated (Norrie, 2004). Since the constellation is valuable as historical thread, or illumination of 'the process stored in the object', one must be careful to avoid its reification (Adorno, 1973). So rather than relying on knowledge of the object and its constellation, it is vital to move past this superficial realm of 'appearance' in order to gain true ontological depth (Norrie, 2004). Such an endeavor moves beyond the empirically available towards finding the conditions of

emergence that makes it possible for such an object to come into concrescence. In so doing a more critical understanding of the object and its relation to its constellation conveys a deeper analysis of the mechanisms that allow for epistemological considerations to be undertaken at all.

Conclusion

The task of modeling a non-identitarian based form of information retrieval that does not rely on the reified description of virtual elements is one for which there is not an obvious solution yet available. While it would be easy to flatly declare that an alternative method should be used, that would fail to advance any possible trajectories. By contrast, what follows is not in any way a formal model, but instead some initial considerations that may provide the necessary footing for further development.

It has been demonstrated that classificatory projects ideologically compromise the ways in which resources are described and made available in information systems. By incorporating aspects of identity thinking in bibliographic practices, models of the world and knowledge of it are reified in ways that obscure the possibility of alternatives. Enabling forms of retrieval based on these virtual constructs allows for ideology to become functionally useful. It is necessary to move beyond those classificatory projects that fuel identitarianism, for not only do they emerge from a critical distinction that was not fully articulated (concrete vs. actual), they, like the term 'illegal alien', allow for ideological thought to fester and divide in counterproductive ways.

If there is a foil to identity thinking then it would be negation and nonidentity. The critical realist dialectical approach emphasizes open totalities in which the characteristics of an object are considered as emergent rather than solidified towards a Hegelian Absolute. Indeed, a statement about an object, such as its 'subject', indicates a negative space much larger than that of its positive aspect, and that the interplay of presence and absence can be remade and structured in ways that allow for new topologies in an ontic landscape (Bhaskar, 2008, p. 48). This negative space may be equated with the fount of pure potentiality from which the world is materially actualized. As such it can be observed that the inclusion of certain virtual elements in bibliographic description represent just a few of the possibilities from a much larger pool of multiplicities.

Actualizing a virtualization separate from its object has been shown to be problematic. The task of gleaning information from an object that can enable new forms of discovery must engage with at least two different questions. First, if the value of subjects, genres, and other virtual elements is required, at least in the short term, then what steps must be taken to mitigate the interpretive aspect of the cataloger? Or instead, what is preventing an object from being able to describe itself or as its creator would? While this does not get us out of the problem of ideological conceptualization, it does at least provide the possibility of a constellation more reflective of an object's genesis. Further, what steps can be implemented to ensure a greater diachronicity even among those elements with a shorter semantic lifespan?

Second, if there is to be a conscious rejection of identitarianism in bibliographic

description, what other aspects of an object can be elicited from it that informs deeper and more nuanced forms of discovery? This will necessarily be determined by the signifying qualities of the object. For example, images, which remain primarily reliant on textual description for retrieval, might more profitably be recalled with a type of search anchored on the ability to provide queries geometrically, structurally, harmonically with color, and other qualities of the image that would be a part of the object's metadata but not expressed in a medium that is separate from its own. Returning to Peircean categories of experience would provide a useful framing this particular approach.

  While these questions represent two of the more immediate trajectories possible in light of the current discussion, much remains to be explored in the role of dialectics and negation as it informs metadata practices and information organization. Doing so will also help to illuminate and grapple with what Keane (2003) describes as semiotic ideologies, allowing for new modalities to emerge that frame the way objects are perceived as objects. Consequently, a renewal in the way description is approached will enable a more nuanced approach to documentary projects. As a method, there is much room to explore what Nonclassification projects will look like.

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