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The Universal and the Unique

Martin Zwick
Portland State University, zwick@pdx.edu

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(2) Author: Martin Zwick

(3) Academic status: Professor Emeritus

(4) Highest earned degree: PhD

(5) Institutional affiliation: Complex Systems Program, Portland State University

(6) Email address: zwick@pdx.edu

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Abstract: This paper explores the abstract dyad of universality and uniqueness. It notes that the two might be complementary and even synergistic, or that they might be alternatives that oppose one another. It also explores how the unique might be an emergent from a primal universality, as well as how the universal might be an emergent from a primal uniqueness. Finally, it offers an interpretation of this dyad in which the universal and the unique are equivalent transforms of one another and thus two sides of the same coin.

Key words: Universality, uniqueness, general and particular, similarity and difference, fundamental dyad, dualism

The Universal and the Unique

Introduction

I've been interested in fundamental dyads or dualisms,[1] most recently (Zwick 2024) the dyad of the intra-ontic and the inter-ontic, namely things are they are ordered internally, which I call "structure," and things as they relate externally to other things, which I call "function." In this paper, I take up a different fundamental dyad: that of the universal and the unique. As a minor point, however, I do also connect the structure-function dyad with the universal-unique dyad.

The dyad of the universal and the unique resembles the more familiar dyad of the general and the particular, but these dyads are not the same. Multiple particulars encompassed by the general could in principle be identical, so any individual particular can be viewed as redundant. In the unequal salience of its poles this dyad is thus asymmetrical. The general is privileged. But unique particulars are by definition non-identical. The unique is not replicated and can never be redundant; it is in fact irreplaceable. So the dyad of the universal and the unique is symmetrical. Neither pole is privileged. The unique is equal to the universal in both ontological and axiological salience.

Of course particulars encompassed by the general are rarely exactly identical, but the differences between one particular and the others are often inconsequential. For example, all cars of the same make and model when they come out of the factory are identical or nearly so. After a while, however, a particular car might become scratched or dented. For simplicity let's assume these changes have not occurred in prominent or functionally important places. This car has thus become distinguishable from other cars of the same make and model, but since such distinguishing characteristics are trivial one would not describe this car as "unique." But if what differentiates one car from another is non-trivial – say each car had installed in it a different engine specified by its purchaser -- one would speak of each individual car as unique. One might even regard the difference that is the basis of uniqueness as "essence." Despite the fact that essentialism is widely considered a philosophical error, essences do actually exist. For example, for bacteria genotype is essence.

The dyad of the universal and the unique is also closely related to the more general dyad of similarity and difference. It is commonplace in postmodern thought to privilege difference over

1 In (Zwick 2024) I distinguish between dualisms and dyads, but here I l treat these terms as synonyms.

similarity, but difference in the absence of similarity is inconceivable, since similarity is implicit in the joining of two things together, and this even constitutes an argument for similarity being primordial. One might perhaps argue that to speak of a dyad of similarity and difference is, at a meta-level, to privilege difference, since by definition a dyad requires two different poles, but again the fact that these poles are joined together implies that they have something in common. It is interesting that statistically, when comparing observed and expected quantities, the null hypothesis is usually similarity, more precisely identity, i.e., a hypothesized difference of zero. By contrast, to evaluate a null hypothesis of difference one would have to specify quantitatively what the expected difference is. This privileging of similarity as the default also characterizes Bateson's (1979) definition of information as news of difference.

My first encounter with the dyad of the universal and the unique occurred years ago in a conversation I had with Stephen Jolin, a philosopher friend of mine. Probably drawing upon Kant's categorical imperative, I said something about value being necessarily universal. Steve responded by noting that there was value not only in the universal, but also in the unique. This was the first time that I seriously considered the dyad of the universal and the unique and entertained the idea of parity between its two poles. Since then, I have revisited this dyad many times.

1 The unique & the universal are complementary, even synergistic

One such revisiting occurred in connection with an earlier paper titled "Levels of Altruism" (Zwick & Fletcher 2014) where "levels" mean progressive widenings of the circle that defines "self." At the lowest level, "self" is simply oneself. Altruism is founded upon self-interest, which is the form in which value – in game- and decision-theoretic terms, "utility" – first appears on the evolutionary scene. At the next level "self" broadens to include kin, in accord with the evolutionary explanation of altruism in terms of kin selection. A still wider circle of "self" would include non-kin who respond in kind to favorable treatment; in evolutionary theory this is "reciprocal altruism." At higher levels one might speak of group altruism, which evolutionary theory might posit as generated by group or multi-level selection. (However, the existence of selection above the individual level is controversial.) The circle widens further if altruism is directed towards all humans – one can call this "species altruism." It widens still further if directed towards all forms of sentient life and perhaps also non-sentient life; and possibly even beyond this towards non-living things – one might call this "being altruism." At every level the circle defining "self" becomes more encompassing. But aside from these ways by which "self" can be expanded based on an ever-broadening conception of similarity, there is also an altruism based on difference. Ethical imperatives derive both from universality and from uniqueness.

The complementarity of the universal and the unique is readily illustrated in the domain of religion. Religious holidays that commemorate particular events can also be accorded universal significance. The unique and universal aspects of these holidays are complementary, even synergistic. Their universal aspects gain emotional power by the unique concreteness of the dramatic stories that they tell. Complementarity of the universal and the unique can also be illustrated in the socio-political domain. For example, public health policy must be governed by what is universal or nearly so, i.e., must be based on systematic study of an adequately wide sample of people, not anecdotal information about a few specific people. But medical

treatment of individuals should ideally be tailored to each unique individual, and general populational guidelines have limited relevance for such individual treatment. The universal and the unique each has its place. The global and local are not alternatives but complement one another.

One can generalize this complementarity to problem solving in any sphere of action. If one wants to solve a very general problem, one will usually rely upon an abstract description of the problem that is relatively simple. But if one wants to solve a specific problem, its description will usually have to encompass a great deal of concrete and complex detail. For example, if one wants to be able to address automobile traffic congestion in general, one might explore the implications of a very abstract and aggregated model such as, say, a fluid model of traffic flow. But if one wants to relieve congestion in a particular city or location, one might need to model traffic at every street and intersection, and to do this one might use a highly disaggregated and detailed agent-based model. Models intended to be general will typically differ from models that address particular situations.

One might object and assert that a general problem that encompasses many unique instances *might* have a solution that is also very general. But it is more likely that no general solution will satisfactorily solve every – or even any -- unique instance of the general problem, since "the devil is in the details." So to simplify and exaggerate, one might say that problems are universal (really ubiquitous) but solutions are unique. Still, while a universal solution may not be adequate for specific instances of a problem, it might provide insight to guide development of multiple unique solutions. Also, unique solutions may be sought using universal methodologies (Zwick 2023).

Finally, human nature is both universal and unique. There is a biological human nature (Pinker 2003) that is universal for our species and there is also uniqueness at the level of the individual person (Tooby and Cosmides 1990).

2 The unique & the universal are alternatives, even opposed

To continue discussion of religious holidays, while the universal and the unique are in principle potentially complementary, either pole of this dyad might be ignored. Some celebrants of a holiday might not appreciate its implicitly universal message and might experience its central story as relevant only to the group. Conversely, other celebrants might pay little or no attention to anything that is group-specific, focusing instead only on the possible universal meaning of the holiday. Those who celebrate only the universality of the holiday and those who celebrate only its uniqueness are inherently at odds with one another. Similarly, in remembering (for example in a museum exhibit) a past evil inflicted upon some group, there is tension between those who want to universalize that historical event and those who want to restrict the focus of remembrance to the group that suffered this evil.

More generally, world religions present themselves as universal truths, whose validity is not limited to specific human groups. Yet every religion is indelibly imprinted with the uniqueness of its origin and early development. From one perspective this uniqueness of every tradition is a scandal, a primal taint, which subverts its claim of universality. Traditions might adopt different strategies to deal with these taints: They may try to distract attention from them or declare

them to be mysteries that supplement the tradition's universal message. From another perspective, however, the uniqueness of every religious tradition is not a liability but an asset: it crystallizes the commitment of followers and is the basis on which each tradition competes with other traditions that also claim universality. After all, if religions were to consist only of universal aspects all but one would be redundant, and one could not argue for any one universal religion over another.

Religions that claim universality have wide appeal, yet also often succumb to aggressive ideologies of supercession. Religions that accept their (at least partial) uniqueness often succumb to chauvinism and exclusivism yet they coexist more easily with other unique religions, and even with religions that claim universality.

The tension between the universal and unique occurs in many other domains. For example, theories of history might be either ideographic and stress the uniqueness of historical events or nomothetic and stress the lawfulness of these events. The ideographic perspective emphasizes the differences between events given the same label (for example, the label of "revolution"); the nomothetic perspective emphasizes the similarity between events given the same label.

The unique and universal may be in more than tension with one another. They may be in strong opposition. The universal wars on the unique, and vice versa. For example, globalism is in active opposition to nationalism. Hazony (2018), defending nationalism, writes, "The moment that the particular…insists on self-determination, everything changes. We then find that the universal hates the particular, is appalled and disgusted by it. And this hate and disgust only grow more inflamed as the resistance of the particular proves itself resilient and enduring." The universal seeks to undermine the unique, even to obliterate it. Conversely, the unique scorns the universal, challenges its hegemony, and denies its necessity or relevance. To the unique, the universal is a compromise, a lowest common denominator, a cliché.

On an individual level, love that is universal is opposed to love for the unique, and vice versa. Which love is the highest love, or are they just different? A long time ago, I encountered this issue personally when I was discussing with a friend the possibility that I might have children, and I said to him – proudly signaling my universalist virtue – that I would not favor my own child over anyone else's child. To which my friend responded, "My God, you'd better!" Socrates criticized Euthyphro for prosecuting his father. Confucius held that one's obligations to one's immediate family superseded one's obligations to other persons. Wyschogrod (Batnitzky 2016) argued that "undifferentiated love, love that is dispensed equally to all, must be love that does not meet the individual in his individuality but sees him as a member of a species, whether that species be the working class, the poor, those created in the image of God, or what not."

3 The unique emerges from the universal, the universal from the unique

To treat the universal and the unique as complementary to one another or in opposition to one another or as both complementary and in opposition takes them as preexisting and with equal status. But one might ask the question of how the universal or the unique arises in the first place and whether one or the other is primordial. Not surprisingly, one might answer this question in two opposite ways, as follows.

The unique in structure (internal order) is often unique because of combinatorial complexity, where the structure is a composite of universal building blocks. For example, a small protein of 200 amino acids, of which in biological systems there are 20 varieties, will have a unique amino acid sequence. Since the number of possible proteins of length 200 is 20^{200}, there is not enough matter in the entire universe for all these possible proteins to be instantiated, and since natural selection does not encounter the entire ensemble of theoretically possible proteins, evolution is path dependent and governed by transient kinetics, not equilibrium thermodynamics. The unique can thus emerge from the universal. Another example of combinatorial complexity giving rise to open-ended generativity is human language: The full set of possible (and not even very long) sentences will never be uttered even if the language was spoken by all sentient beings in the universe from the time that sentience arose until now. Combinatorial complexity is a major source of uniqueness.

In phenomena that are dynamic, another source of uniqueness is randomness, where the results of randomness persist because they are reinforced by feedback effects. This is the idea of "frozen accidents" (Gell-Mann 1994). The variability produced by randomness need not be large; in chaotic dynamics, small differences in initial conditions can be amplified to result in large differences in later effects. This is another instance of path dependence. It is also a fusion of the idiographic and nomothetic: The randomness of the initial state – the accident – is ideographic; its amplification by feedback – its becoming frozen (metaphorically) – is nomothetic. Conversely, in the phenomenon of "self-organized criticality" (Bak 1996) nomothetic processes bring a system to a critical state, where ideographic events can then move the system in multiple possible directions.

The opposite type of emergence can also occur: the universal can emerge from the unique. Uniqueness may be a property of all individuals of a kind that is inherently complex. For example, all human beings are genetically unique, and individuality already exists at the biochemical level. Since individual people are all unique, there is, within the human domain, a *universality of uniqueness*. This is a different kind of universality than the universality that human nature exhibits due to genotypic similarities. If one joins this emergence of a universality of uniqueness to the idea of the emergence of uniqueness from a ground that is universal, e.g., by combinatorial complexity, one has the interesting alternation of universality-uniqueness-universality. The emergence of uniqueness is the negation of universality, and the return of universality, now of uniqueness, is a negation of this earlier negation.

Another way that universality might emerge from uniqueness is the following. A system is a structure-function dyad, a "Janus-faced holon" (Koestler 1978), structure facing in and function facing out. If internal structure is unique, the system's external attributes (properties) are likely also to be unique. For example, enzymes typically have unique or relatively unique catalytic properties by virtue of having a unique three-dimensional conformation, especially at the enzyme's active site, and this is in turn the result of combinatorial complexity, namely the unique amino acid sequence. This unique catalytic capability might, however, be exploited by different organisms in a wide variety of different biological functions. While this variety of functions is not universality, a system with unique attributes could *in principle* interact with *any* other system. So universality of function can emerge from uniqueness of structure. Such function can bring either benefit or harm – and perhaps both – by virtue of its uniqueness. But

this example is a special case: Structure need not be unique; and even uniqueness of structure only allows but does not necessarily imply universality of function.

4 The unique & universal might be equivalent transforms of each other

I conclude with a mathematical metaphor that sees the universal and the unique as equivalent. One can imagine the universal and the unique being an isomorphic (information-preserving) *transformation* of one another. The Fourier Transform of a Gaussian (a bell-shaped curve) in the space or time domain is a Gaussian in the frequency domain. The space-time and frequency domains are alternative and opposite perspectives on the same phenomenon, and all the information in either perspective is fully present in the other. As the Gaussian in the space domain gets broader, its transform in the frequency domain gets narrower. Taking this to the limit, the Fourier Transform of a constant is a delta function, a spike in frequency space with an integral of one. And vice versa: the Fourier Transform of a delta function in the space or time domain is a constant in the frequency domain. Constancy is universality and the singularity of the delta function is uniqueness, so universality in the one domain is equivalent to uniqueness in the other domain.

There is something like this equivalence in religious discourse. The monotheistic notion of "God" is one for which the universal and unique are regarded as deeply equivalent: God is said to be infinite, i.e., universal, but simultaneously One, i.e., unique.

In closing, I note that in its abstraction and only occasional offering of concrete examples this paper privileges the universal over the unique, but this is compensated – or belied – by the stronger case that this paper occasionally makes for the unique.

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