

## Wholeness as the Body of Paradox

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This essay is written at the crossroads of intuitive holism, as typified in Eastern thought, and the discursive reflectiveness more characteristic of the West. The point of departure is the age-old human need to overcome fragmentation and realize wholeness. Three basic tasks are set forth: to provide some new insight into the underlying obstacle to wholeness, to show what would be necessary for surmounting this blockage, and to take a concrete step in that direction. At the outset, the question of *paradox* is addressed, examined in relation to Zen meditation, the problem of language, and the thinking of Heidegger. Wholeness is to be realized through paradox, and it is shown that a complete realization requires that paradox be *embodied*. Drawing from the fields of visual geometry and qualitative mathematics, three concrete models of paradox are offered: the Necker cube, the Moebius surface, and the Klein bottle. In attempting to model wholeness, an important limitation is recognized: a model is a symbolic representation that maintains the division between the reality represented and the act of symbolizing that reality. It is demonstrated that while the first two models are subject to this limitation, the Klein bottle, possessing higher dimensionality, can express wholeness more completely, provided that it is approached in a radically nonclassical way. The final question of this essay concerns its own capability as an essay. It is asked whether the present text is restricted to affording a mere abstract reflection on wholeness, or whether wholeness can tangibly be delivered.

*He tarries at the threshold.*

*He delays.*

*He sets out with trepidation, clinging to Her memory, leaves but does not.*

*Odysseus does not know that his moment of departure will bring him  
 home to Her.*

— *The Plight of Odysseus*

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From time immemorial, we human beings have sought to overcome the fragmentation in our lives and attain wholeness. What has been blocking the way? The "I." What I mean is that the feeling of fullness, integrity, organic unity, has eluded us — not primarily because of any external obstacle separating us from "it," but because, whatever the explicit goal we have sought to attain, on an *implicit* level, the "I" preemptively has asserted itself. Preconsciously, before "I" can even begin to reflect on the contents of "my" thoughts, this sense of an "I" establishes itself and propels itself to the fore: this deeply ingrained sense of "my" self as an ego, an individual being whose inner core is segregated from the outer environment by a well-delineated boundary. This cleavage, embedded so deeply in every reflection, expresses itself in human language as the division of subject and object. Thus, one says, "I seek wholeness," and while the content of this assertion gives voice to a widely shared aim, its *form*, its underlying syntax, tacitly effects the *fracture* of the whole: there is "I" and there is "it," the "wholeness," that which, in fact, is a *subverted* wholeness, a wholeness undermined by the very act of referring to "it" in this way. In so *positing* wholeness, one denies it, since such positing is an act that implicitly separates what is posited from the "I" who posits.

To be sure, all this is rather well-known and has been an important focus of attention in spheres of discourse as disparate as existentialist philosophy, modernist literary theory and Zen Buddhism. But what has been done to address this problem of an "I" cut off from "thou," from other, not merely by circumstance, but by its innermost nature, an "I" which nonetheless — like the ever-to-be-frustrated Sisyphus of Greek mythology — strives for wholeness? In spite of so much said by so many, are we not *more* estranged from one another today than we ever have been (Jaspers, 1975)? At this juncture in human history, has our problem of fragmentation not reached critical proportions, as evidenced by widespread disorder on every level of human affairs: personal, social, national, international, planetary (Bohm, 1980)?

The threefold purpose of this essay reflects the search for a meaningful response to our unmet need for wholeness. I hope to provide some new insight into the underlying obstacle to wholeness, to show what would be necessary for overcoming this blockage, and to attempt a concrete step in that direction. My exploration will begin by addressing the question of *paradox*, considered in relation to Zen meditation, the problem of language, and the thinking of Heidegger. I will show that it is paradox through which wholeness may be realized and that a complete realization requires that paradox be *embodied*. To that end, I will present several concrete models of paradox found in the fields of visual geometry and qualitative mathematics. But is a model not merely a symbolic representation of reality, an objectification of it that continues to be divided from the subject who symbolizes? In con-

fronting this question, I will consider the crucial issue of the *dimensionality* of the model. The final question of this essay concerns its own limitation as an essay. Are we restricted here to just *talking about* authentic wholeness, or is it possible to tangibly deliver it in this very text?

### The Paradox of *Prajna*

If we begin with the understanding that the primary impediment to wholeness is our preconsciously established experience of ourselves as egos, we may ask whether this fragmenting sense of identity could be surmounted by somehow dissolving or transcending the boundaries of the ego. In fact, is this not the essential aim of disciplines of meditation down through the ages? The commentary of philosopher D.T. Suzuki (1969) on two approaches to Zen meditation is instructive on this score and will serve as my point of departure.

Suzuki identified the Northern School of Chinese Zen with the meditation technique of *dhyana*. The aim is to go beyond the finite world of diversity given to the senses, gain awareness of a pristine, seamless totality by an act of self-transcendence. We attach ourselves to myriad things, people and particular ideas. Such fixations on the finite are what keep us in bondage. Why do we become thus fixated? Because of the limited and limiting sense we have of our *selves*. It is the underlying feeling of incompleteness and vulnerability accompanying our experience of ourselves as finite that leads us to form attachments to other finite beings — as if these others could fill the hole in ourselves, compensate us for our own lack of wholeness. Since the wholeness in question actually is not finite, the attachments formed never serve the purpose for which they truly were intended. The Northern School of Zen recommends a way out of this dilemma: we must practice *dhyana*, polish the mirror of consciousness, gradually purify our field of self-awareness through unrelenting meditation. When not a single blemish remains to cloud the reflection in the glass, we shall see into ourselves with impeccable clarity, see through to the truth of our infinite nature. With wholeness thus attained, all finite attachments will spontaneously fall away.

However, on a subtle level, finitude evidently is still at work in this approach. The goal is set to transcend the boundaries of the self, make the transition from boundedness to boundless infinity, from fragmentation to wholeness, through the practice of meditation. The proponents of this method would be likely to add that, in reality, self is *not* separated from infinite totality, that the separation is only in one's mind, that the purpose of meditation is to change one's mind. So we begin in a state of illusory boundedness and must move toward one of enlightenment and wholeness by means of the proper technique.

But is not the mere assertion that self “is not really separated from wholeness” a linguistic abstraction, and are not these words contradicted by our actions when we treat wholeness as a goal toward which we must gradually “advance” by diligently following the prescribed technique? To emphasize the need for a technique to *gain* wholeness, is to imply that, in fact, we do *not* already possess it, at least not in a concrete way. It may be said that wholeness somehow lies “behind” or “beneath” the experience of finite selfhood, but in regarding the present actuality of self, its concrete manner of knowing, as *maya*, do we not project wholeness to a potential state of future realization? In thus separating finite self from wholeness, a boundary is tacitly inscribed not only around self, but around wholeness as well (though, in our abstract utterances, we may posit wholeness as “that which is unbounded”). An authentic state of wholeness would be without a boundary of any kind.

If asked why a meditation technique is needed, a proponent of the Northern School might respond with words to the effect that “the illusion of the bounded self is so powerful that only through patient practice can we transcend it.” Again there is the subtle dualism at play, the orientation toward wholeness that actually keeps full-fledged wholeness out of reach, since wholeness and separation *themselves* are separated in this approach. To view bounded self as “mere illusion” and boundless infinity as “really real,” to explicitly negate the former and affirm the latter, is to maintain the condition of boundedness on an implicit level. Note, moreover, that behind the assertion that the finite self “is not real” is the subtler fact of syntax that this self “is”; negated in overt content, self is posited in underlying form; thus, the covert effect of such a statement is to *maintain* the finite self. Infinite totality is posited in the same basic way: “it is real,” the “it is” carrying with it the syntactical implication of an object that is (de)finite, boundable. In other words, although the content of our assertions shrinks finite self to naught by discounting it as “mere illusion” and projects a “true” or “pure” allegedly infinite self, the *form* of our speaking (thinking and acting) — because it posits these terms (one in simple negation, the other in simple affirmation) — effectively renders them categorially distinct: both are made finite.

Of course, *any* act of predication, any assertion that “X is” or that “X is not,” is an act of circumscribing X, rendering it finite, implicitly (if not explicitly) turning it into an object that is cast before the subjectivity of the predicator. Quite irrespective, then, of the explicit content of my thoughts or words, when the form of my discourse is that of predication, implicitly I finitize, objectify, create an other. Therefore, in predicating self, I actually produce what is other, what appears over against this existential self that predicates. The predication of *infinite* self is clearly no exception. The boundary prereflectively drawn around it, laid down in advance of my conscious attention to its content, projects it beyond the concrete immediacy of the

existential moment thereby making it remote, something I might misguidedly seek to pursue by practicing the “proper technique.” Here we see how goal-directed practice issues from predicative discourse, and how applying said practice to attaining infinite wholeness undermines that “attainment” from the first, making such activity essentially an exercise in futility. A predicated infinity must forever remain beyond my reach since to predicate is to finitize.

Then must I *stop* predicating if I wish to realize wholeness? Can I simply stop? Predication is the fundamental gesture of human language. Can I reach the infinite simply by forsaking language for “wordless bliss”? Predication is the primary act of human self-definition (finitization): in saying “X is,” or “X is not,” the preconscious, prereflective message is that “I am.” Heidegger called this tacit “I” that exists in advance as the positor of any “X” the “special subject” (1977, pp. 273–280).<sup>1</sup> Can wholeness be achieved merely by abandoning this reflecting self? Can the speaking/thinking human subject that is prereflectively chosen in choosing to predicate be left behind for the “infinite of pure experience”? The problem is that such an effort at “self-abandonment” necessarily would be self-subverting, for, simply to cease speaking (thinking, acting), to “leave the finite behind” in this way, would carry the implication of *crossing a boundary*, and where there is such a boundary, there is predication covertly working to perpetuate the finite. To put it a little differently, in explicitly attempting to abandon the finite self, implicitly I predicate it, turn it into an other, an object cast before a predicating subject that has *not* been abandoned, one still operating behind the scenes. Thus, like the proverbial Chinese finger puzzle, the more I strive for freedom in this way, the more I am entrapped. In sum, whether I explicitly predicate wholeness or attempt to realize it through the abandonment of predication, the outcome is the same. Division persists. The underlying split between “I” and other, subject and object, is maintained.

But it appears there may be another possibility, an approach that would confound the predicative form of human discourse from *within itself*. This alternative is adumbrated in Suzuki’s description of the Southern School of Chinese Zen.

In the Southern School, the “technique” is to cease preoccupation with technique, to overcome (both in word and in deed) the idea of a circumscribed goal from which one is separated and must strive methodically to

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<sup>1</sup>Although Heidegger’s analysis was historically focused here on the well-developed form in which subjectivity emerged toward the end of the Renaissance with the reflections of Galileo and Descartes, the underlying sense of “I,” being inseparably linked to human linguistic experience in general and as such, must have been present in more concrete forms from the outset of human history.

attain. Rather than rejecting outright the Northern School's emphasis on gradually "polishing the mirror of consciousness" (*dhyana*), the advocates of the Southern School portrayed the meditative experience as spontaneous and authentic when practiced in a form known as *prajna* — the sudden realization that finite diversity and infinite totality, while being as different as they can be, nevertheless are *one and the same*:

So long as the seeing [into infinite totality] is something to see, it is not the real one; only when the seeing is no-seeing — that is, when the seeing is not a specific act of seeing into a definitely circumscribed state of consciousness — is it the "seeing into one's self-nature." Paradoxically stated, when seeing is no-seeing there is real seeing . . . . This is the intuition of Prajnaparamita. (Suzuki, 1969, pp. 28–29)

It is Prajna which lays its hands on Emptiness, or Suchness, or self-nature. And this laying-hands-on is not what it seems . . . . Inasmuch as self-nature is beyond the realm of relativity, its being grasped by Prajna cannot mean a grasping in the ordinary sense. The grasping must be no-grasping, a paradoxical statement which is inevitable. To use Buddhist terminology, this grasping is accomplished by non-discrimination; that is, by non-discriminating discrimination. (p. 60)

The critical step taken by the Southern School is the embrace of paradox. At every turn one must resist the temptation to fall back on the conventional mode of operation (that which presupposes the division of subject and object): "all the logical and psychological pedestals which have been given to one are now swept from underneath one's feet and one has nowhere to stand" (Suzuki, 1969, p. 26). This means that paradox is allowed to pervade.

It is through paradox that one challenges predication from within. Rather than saying, "X is" or "X is not," one says, "X is not-X." This is no mere affirmation or denial of a predicated content, but predication's denial of itself. In asserting that "X is not-X," the customary subject/predicate format is being used ("X" is the subject, "is not-X" is the predicate), but in a manner in which the content this sentence expresses calls the form into question. The paradoxical statement amounts to a declaration that the syntactical boundary condition that would delimit X cannot effectively do so; simple predicative boundary assignment is thwarted, so that even though X implicitly is being posited as distinct from that which is external to it, at the same time, it is inseparable from it. The statement "X is not-X" boggles our minds because the human mind is a discriminatory organ: it is that prereflectively chosen "I" whose principle function is to reflect — to posit, draw boundaries, finitize, separate. Nevertheless, to appreciate fully the concept of *prajna*, two orders of paradox must be distinguished.

Consider a commonly cited example of a paradoxical statement: "Everything I say is false." Evidently, this assertion is true if it is false, and false if it is true! Applying the general formula for paradox,  $X \equiv \text{not-X}$ , to the particular case, the term X stands for the truthfulness of the assertion (it is

both true and false). Following Heidegger (1962, p. 31), we may call this order of paradox *ontical*: its key characteristic is that its opposing terms (“truth” and “falsity”) are particular objects of thought, entities already projected before the subjectivity of the thinker. While the well-known “liar’s paradox” certainly subverts the boundary between these objects, it “comes too late” to directly affect what Heidegger would call the *ontological* boundary, the division prereflectively established between the object(s) and the existential subject. It is this latter division that constitutes the essence of predication. Therefore, to confound predicative boundary-drawing in the most essential way, paradox must be taken beyond the merely ontical level and expressed more primordially; it must be brought to bear on the bounding of subject and object that “precedes” any mere division among particular objects. Thus, in saying “X is not-X,” one must mean, “I am not-I,” with “I” taken as ontological: not just a *particular* (i.e., objectified) subject, a specifiable individual with a personal history and personal characteristics, a given ontical being. Rather than being some object of reflection, the “I” in the formula for paradox must be the prereflectively established subject that reflects.

Of course, the instant we install the prereflectively chosen “I” in the formula, it passes over into the domain of the *reflected upon*, itself becoming but an object now cast before a newly established subject not included in the formula. In thus formulating ontological paradox, the paradox becomes ontical. From this it should be clear that the rule of predication will not be challenged by the mere *formulation* of paradox. To write and think “I am not-I” in the usual manner of writing and thinking is to continue to predicate. Not that reflective predication would simply be suspended in realizing ontological paradox. The “I” or thinking subject would indeed still be reflecting upon itself, and, by virtue of the fact that it *was* reflecting, it would be making itself into an other, a “not-I.” And yet, it would be doing this without *just* abstracting itself, without turning itself into *merely* what is other, thus cutting itself off from its prereflective roots. In realizing ontological paradox, the “I” would continue in the reflective posture, standing outside itself; but, at the same time, it also would be standing *within*. The philosopher Eugene Gendlin intimated the possibility of such a curious stance. In his essay “Words Can Say How They Work” (1993), Gendlin (expanding upon Heidegger’s [1962] notion of *Befindlichkeit* or “moody understanding”) suggested that our words originate from a prelinguistic source that continues to operate in the midst of our speaking, so that, at least in principle, we can both speak reflectively *about* this “silent,” prereflective source and directly engage it. I propose that by thus bringing together language and silence, outside and inside, the reflective and prereflective, we approach *prajna*, the paradoxical wholeness of the finite and the infinite.

Nevertheless, old habits are slow to die. It is the reflective mode of consciousness that has long been dominant. Therefore, although the abstract words written on this page may be rooted in a prelinguistic source that continues to operate even as we read, it is abstraction that prevails. We may *reflect* on our concrete prereflectivity and its paradoxical relation to the reflective, yet we find it difficult vividly to feel its living presence at work in our midst.

Perhaps we are in a position similar to that attributed by Jung to the student of alchemy “who has acquired some [abstract] knowledge of his paradoxical wholeness” but has not yet succeeded in “making a reality of [it]” (1955–56/1970, par. 679). What would be entailed in such reality-making? The motto of alchemy is “dissolve and coagulate.” By the former, one attains abstract understanding; with the latter, that understanding is crystallized, made palpably concrete. I suggest that this is what we must do in the present context.

But, again, we cannot end the rule of predicative reflection simply by breaking contact with it, since any such breaking implies predication. The aim is to raise the prereflective from obscurity in a manner in which it is integrated with the reflective. Yet it seems that, to do this, we must abide with what has been dominant, follow reflection’s own trajectory, go *through* it to reach its end. Accordingly, rather than attempting to jump the gap to the prereflective, to go directly from these abstract words of paradox to their concrete prelinguistic source, let us proceed more circuitously. Let us begin our concretization while remaining in the still dominant mode. We are about to see that, indeed, without simply moving out of the reflective stance, we may start to clarify ontological paradox by expressing it more concretely, fleshing it out, embodying it. I suggest that such a concretization is necessary to pave the way for a smooth and full meshing of the abstract and concrete. I propose that the abstract must be prepared for its integration with the concrete by first being concretized preliminarily, in its own terms.

### Toward Embodying Paradox

Over the past century and a half, paradox has pervaded philosophical and scientific discourse — from Kierkegaard to Sartre to Derrida, from Einstein to Gödel to the peculiarities of quantum mechanics. But I venture to say that while modernist and postmodern theory and philosophy have challenged the very foundations of predication, they have maintained predication’s implicitly disembodied mode of operation. Although words and abstract symbols of paradox have abounded on the contemporary scene, the *embodiment* of paradox has scarcely been forthcoming. To address this limitation, I propose that we descend into the fleshier realm of perceptible, tangible bodies of paradox.



I am going to depict three closely related structures of this kind. The first two will still do no more than *symbolize* ontological paradox, reflect on it without incorporating its prereflective aspect in a prereflective way. The third body of paradox, possessing an *extra dimension*, will permit us to go further.

### *The First Body of Paradox*

In phenomenological philosophy and Gestalt psychology, there is a well-known visual structure suggestive of paradoxical wholeness. I am referring to the *Necker cube*, shown in Figure 1b. Let us first consider the principle of conventional opposition as expressed through visual perspective in Figure 1a.

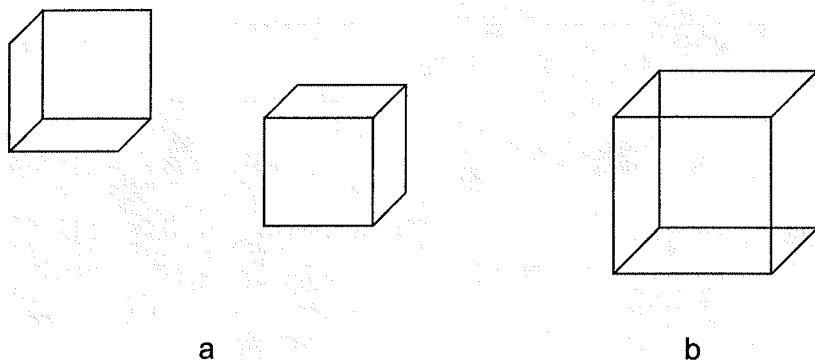


Figure 1: Opposing perspectives (a) and Necker cube (b).

If you were initially viewing a solid cube from the angle shown in the left-hand member of Figure 1a, you would obtain the point of view of the right-hand member by (1) moving  $180^\circ$  around the cube to the opposite side, and (2) moving above the cube, since the left-hand perspective gives the view from below. The faces of the represented solid that are visible from the right-hand perspective are precisely those which were concealed from the left-hand point of view, and vice versa. In our ordinary experience with perspective, it is of course impossible to view both sides of an object simultaneously; all six faces of the cube cannot be apprehended in the same glance. Opposing faces are closed to each other.

Turning now to Figure 1b, inspection readily discloses that both of the perspectives shown in Figure 1a are encompassed in the body of the Necker cube. This creates visual ambiguity. You may be perceiving the cube from the point of view in which it seems to be hovering above your line of vision when suddenly a spontaneous shift occurs and you see it as if it lay below. Two distinct perspectives surely are experienced in the course of gazing at the

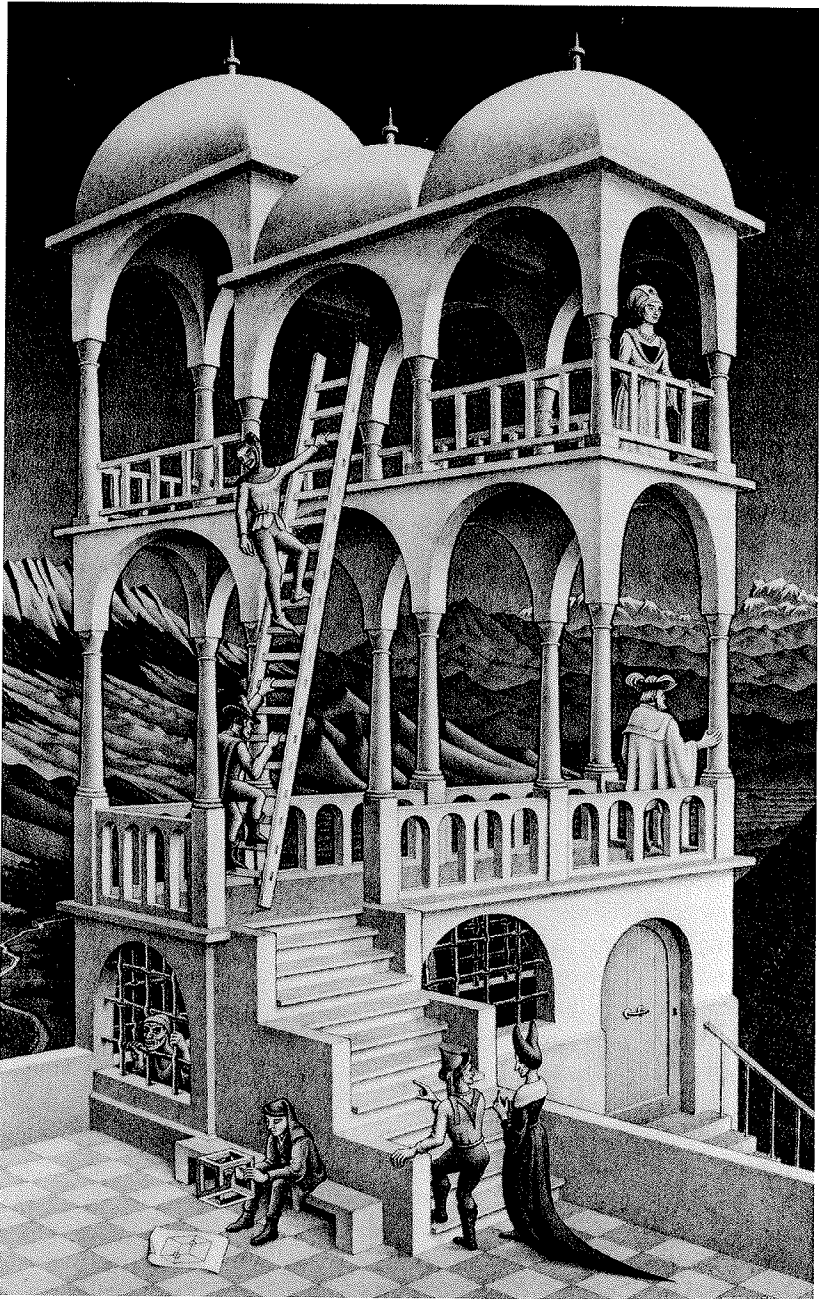


Figure 2: M.C. Escher's "Belvedere" © 1997 Cordon Art: Baarn, Holland. All rights reserved.

cube but they completely overlap each other in space, are internally related, integrated in a thoroughly interdependent manner (think of what would happen to one perspective if the other were erased).

However, in our customary way of perceiving the Necker cube, paradox is only partially given. Although the cube's perspectives are indeed superimposed in space, they remain polarized with respect to *time*. Viewing perspectives in linear succession, *first* we see one, *then* the other. But we can go a step further in our perception of the cube. Instead of allowing our glance to oscillate from one perspective to the other, we actually can break this visual habit and view both perspectives of the cube *at the same time* (Rosen, 1986, 1994). This possibility is confirmed in Bruno Ernst's (1986) study of *Belvedere*, a graphic work by M.C. Escher (see Figure 2).

In his analysis of the Escher print, Ernst calls our attention to a detail in the lower left-hand corner: a boy is puzzling over an odd-looking structure he holds in his hands. Lying on the floor below is the blueprint for this structure and, indeed, for the entire artwork. It is the Necker cube. To bring out the underlying principle of *Belvedere*, Ernst provides his own diagram of the cube (Figure 3a).

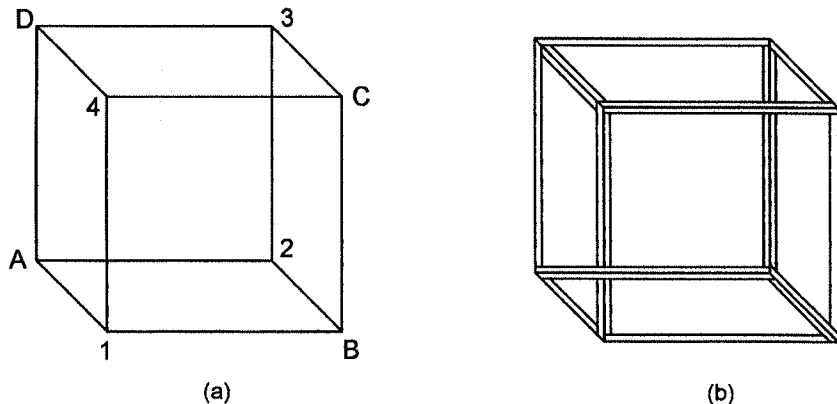


Figure 3: Bare Necker cube (a) and cube with volume (b) (after Ernst 1986, p. 86).

According to Ernst, the cube encompasses within itself

the projection of two different realities. We obtain the first when we assume that points 1 and 4 are close to us and points 2 and 3 are further away; in the other reality, points 2 and 3 are close and 1 and 4 further away . . . . But it is also possible to see points 2 and 4 in the front and 1 and 3 in the back. However, this contradicts our expectation of a cube; for this reason, we do not readily arrive at such an interpretation. Nevertheless, if we give some volume to the skeletal outline of the cube, we can impose said interpretation on the viewer by placing A2 in front of 1-4 and C4 in front of 3-2. Thus we obtain [Figure 3b] and this is the basis for *Belvedere*. (Ernst, 1986, p. 86; translated by M.A. Schiwy)

It is clear that Figure 3b “contradicts our expectation of a cube” because it brings together opposing perspectives that we are accustomed to experiencing just one at a time. When this happens, there is an uncanny sense of self-penetration; the cube appears to do the impossible, to go *through* itself (thus Ernst speaks of constructions based on the cube as “impossible”; 1986, pp. 86–87). If we again imagine the bare cube (Figures 1b and 3a) as a solid object appearing in space, as one whose faces are filled in, we find that perspectival integration has an interesting effect on those faces.

In viewing the cube from a single perspective, certain faces of the symbolized solid seem to lie inside, others outside. Then, when the jump is made from one perspective to the other, all the “inside” faces of the cube presently appear on the “outside,” and vice versa. But it is only in the conventional, perspectively polarized approach that faces are perceived as *either* inside *or* outside. With the fusion of perspectives that discloses what lies *between* the poles, each face presents itself as being inside and outside *at the same time*. Thus the division of inside and out is symbolically surmounted in the creation of a one-sided experiential structure whose opposing perspectives are simultaneously given.

Simultaneously? Well, that is not exactly the case. I have shown that we can apprehend the cube in such a way that its differing viewpoints overlap in time as well as space. But what we actually experience when this happens is not simultaneity in the ordinary sense of static juxtaposition. We do not encounter opposing perspectives with the same immediacy as figures appearing side by side in space, figures that coincide in an instant of time simply common to them (as, for example, the letters of the words on this page). Yet there is indeed a coincidence in the integrative way of viewing the cube, for perspectives are not related in simple temporal succession (first one, then the other) any more than in spatial simultaneity. If opposing faces are not immediately co-present, neither do they disclose themselves merely in *seriatim*, in the externally mediated fashion of linear sequence. Instead the relation is one of *internal* mediation, of the *mutual permeation* of opposites. Perspectives are grasped as flowing through each other in a manner that blends space and time so completely that they are no longer recognizable in their familiar, categorially dichotomized forms. You can see this most readily in viewing Figure 3b. When you pick up on the odd sense of self-penetration of this “impossible figure,” you experience its two modalities neither simply at once, nor one simply followed by the other, as in the ordinary, temporally broken manner of perception; rather, you apprehend the *unbroken flow* from one to the other.

The nonsimultaneous aspect of this experience makes it clear that the perspectival integration of the cube does not just negate the distinction between sides. Faces of the cube *are* inside, and yet outside as well. So the feature of

separateness is not lost; rather a wholeness is gained that is deeper than that of the simply di-polar Necker cube; without merely eliminating opposition, the complete interpenetration of opposites is embodied. To be sure, this is *paradox*, and in expressing it through the concrete act of perception performed with the cube, it is fleshed out more than words alone can do. It thus becomes a lifelike presence, manifesting itself in a way that permits one tangibly to grasp it. Through this body of paradox, one may symbolically gain a palpable glimmer of how “I” and “not-I,” subject and object, can be entirely opposed, as in reflective consciousness, and also, prereflectively one and the same.

However, while the Necker cube does afford a glimpse of the merger of subject and object, the insight gained is *no more than* symbolic. For, in the perceptual exercise I do with the cube, the concrete fact remains that it is but an object I reflect upon, a being that is circumscribed, closed into itself, closed off from the inwardness of this subjectivity that does the reflecting. Thus the predicating “I” continues to preside; this subject itself is not opened to view but remains *that from which* the viewing of the object is done. Stated in terms of our two orders of paradox, while the Necker cube exercise may effectively *portray* ontological paradox — because the “I think” actually remains aloof, is not truly opened up and drawn in — this paradox is itself only optical. The prereflective is not concretely engaged.

The Necker cube’s limitation evidently stems from its *dimensionality*. The cube is a line drawing, a one-dimensional structure inscribed in a two-dimensional medium (the surface of the page) and serving as a figuration of three-dimensional reality; needless to say, it is not a three-dimensional object in itself. To go beyond this merely reflective representation of surpassing reflection’s supremacy, to make a concrete reality of ontological paradox, I suggest that a solid, full-fleshed, *three-dimensional* body of paradox would need to stand present. This paradoxical body would stand before me in such a way as also to stand *within* me. It would present itself to me from the inner core of itself and I would recognize that core as my own. That is to say, the three-dimensional object and the dimension constituting my lived subjectivity would be utterly open to one another, would permeate each other in an unobstructed, boundless exchange.

### *The Second Body of Paradox*

In preparing the approach to a thoroughgoing embodiment of ontological paradox, the Necker cube experience of perspectival integration may be expressed in a more tangible form. For this we turn to the field of qualitative mathematics known as topology (the study of the properties of surfaces) and begin with a comparison (Rosen, 1975a, 1986, 1994).

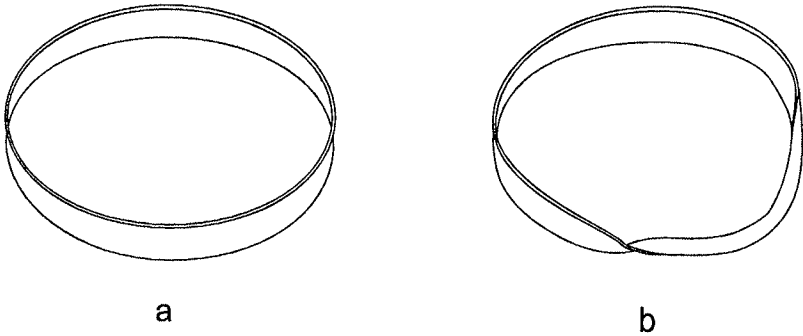


Figure 4: Cylindrical ring (a) and Moebius strip (b).

A cylindrical ring (Figure 4a) is constructed by cutting out a narrow strip of paper and joining the ends. The surface of Moebius (Figure 4b) may be produced simply by giving one end of such a strip a half twist (through an angle of  $180^\circ$ ) before linking it with the other.

The cylindrical ring possesses the conventionally expected property of two-sidedness: at any point along its surface, two distinct sides can be identified. Now, in the Moebius case, it is true that if you place your index finger anywhere on the surface, you will be able to put your thumb on a corresponding point on the opposite side. The Moebius strip does have two sides, like the cylinder. But this only holds for the local cross-section of the strip defined by thumb and forefinger. Taking the full length of the strip into account, we discover that points on opposite sides are intimately connected — they can be thought of as twisting or dissolving into each other, as being bound up internally. Accordingly, mathematicians define such pairs of points as *single* points, and the two sides of the Moebius strip as but *one* side. (If the Moebius property of one-sidedness is difficult to imagine in the abstract, it is very easy to demonstrate. For instance, when you draw a continuous line along the whole length of the strip, upon returning to your point of departure you will discover that your ink mark has covered *both* sides of the surface!)

It is important to recognize that the surface of Moebius is not one-sided in the homogeneous sense of a single side of the cylindrical ring. It is one-sided in the paradoxical sense, one-sided and *also* two-sided, for the local distinction between sides is not simply negated when the Moebius strip is taken as a whole. In coming to interpenetrate each other, the sides do not merely lose their distinct identities. Moebius oneness is essentially similar to the oneness of the perspectively-fused Necker cube. There is inside and there is outside. The two are different. Yet they also are one and the same.

The relationship between the Moebius surface and the Necker cube can be understood as analogous to that between a sculpture and a painting (respec-

tively). The two art forms are both external representations of inner dimensions of experience (thoughts, intuitions, feelings). But the sculpture, by making significant use of three dimensions instead of two, can express the subject matter more concretely, flesh it out through the tactile sense as well as the visual. In like manner, since the Moebius strip is a two-dimensional surface embedded in three-dimensional space, it can embody the paradoxical union of opposites more concretely than can the lines of the schematic cube, limited as they are to a two-dimensional medium of expression.

Nevertheless, while the Moebius model manifests one-sidedness more tangibly than the cube, it is a model, an outward symbolization of the union of inside and out, rather than a full-fledged embodiment directly incorporating the inner depths of subjectivity. What would be needed for the latter? Not a two-dimensional body enclosed as mere object in three-dimensional space, but a body of paradox that is itself three-dimensional.

#### *The Third Body of Paradox*

There exists a higher-dimensional counterpart of the Moebius surface. By way of introduction, consider an interesting feature of the Moebius: its *asymmetry*.

Unlike the cylindrical ring, a Moebius surface has a definite orientation in space; it can be produced either in a left- or right-handed form (depending on the direction in which it is twisted). If both a left- and right-oriented Moebius surface were constructed and then “glued together,” superimposed on one another point for point, a topological structure called a *Klein bottle* would result (named after the German mathematician, Felix Klein).

The Klein bottle (Figure 5) has the same property of asymmetric one-sidedness as the two-dimensional Moebius surface, but embodies an added dimension (Rosen, 1975a, 1975b, 1980, 1994). Note that we cannot actually produce a proper physical model of this curious bottle. That is, left- and

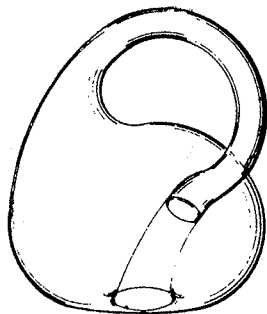


Figure 5: Klein bottle (from *The Ambidextrous Universe* by Martin Gardner)

right-facing Moebius bands cannot be superimposed on each other in three-dimensional space without *tearing* the surfaces. I am going to suggest that this inability to objectify the Klein bottle in three-dimensional space derives from the fact that the bottle indeed calls an *inner* dimension into play.

There is a different but mathematically equivalent way to describe the making of a Klein bottle that, for our purposes, will be very instructive. Once again a comparison is called for.

Both rows of Figure 6 depict the progressive closing of a tubular surface that initially is open. In the upper row, the end circles of the tube are joined in the conventional way, brought together through the three-dimensional space outside the body of the tube to produce a doughnut-shaped form technically known as a torus (a higher-order analogue of the cylindrical ring). By contrast, the end circles in the lower row are superimposed from *inside* the body of the tube, an operation requiring the tube to pass *through* itself. This results in the formation of the Klein bottle. Indeed, if the structure so produced were cut in half, the halves would be Moebius bands of opposite handedness. But in three-dimensional space, no structure can penetrate itself without cutting a hole in its surface, an act that would render the model topologically imperfect. So, from a second standpoint, we see that the construction of a Klein bottle cannot effectively be carried out when one is limited to the three dimensions that frame our experience of external, objective reality.

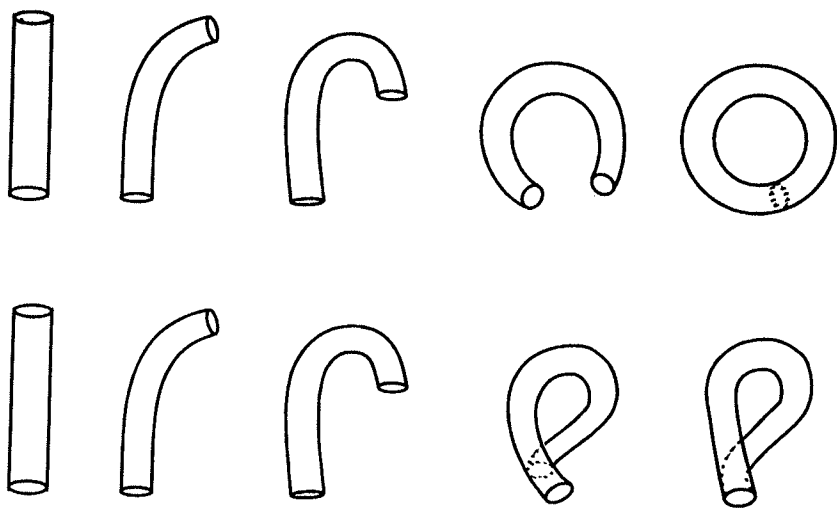


Figure 6: Construction of torus (upper row) and Klein bottle (lower row).



Mathematicians are aware that a form which penetrates itself in a given number of dimensions can be produced without cutting a hole if an *added* dimension is available. The point is nicely illustrated by Rucker (1977). He asks us to imagine a species of “flatlanders” attempting to assemble a Moebius strip. Rucker shows that, since the “physical” (i.e., externally experienced) reality of these creatures would be limited to *two* dimensions, when they would try to make an actual model of the Moebius, they would be forced to cut a hole in it. Of course, no such problem arises for us human beings, who have full access to three external dimensions. It is the making of the Klein bottle that is problematic for us, requiring as it would a fourth dimension. Try as we might we find no fourth dimension “out there” in which to execute this operation.

I suggest that the “fourth dimension” needed to complete the formation of the Klein bottle engages the *inner* dimension of human being; it is not just another arena for reflection, one that stretches before us; rather, it is folded within us, entailing the prereflective depths of our subjectivity. But to fully grasp the nature of the Klein bottle’s “missing dimension,” we must better understand the general meaning of dimensionality.

### *The Classical Treatment of Dimension*

The notion of dimension or space proves to constitute the third crucial factor of our analysis. In experience as governed by the predicating “I,” there is the object, the detached subject before which it appears, and there is *space*, that which mediates between object and subject. Thus, in the thinking of Kant, perceptions of particular objects and events are contingent, always given to variation, but all perceptual awareness is organized in terms of an immutable intuition of space. In the words of Fuller and McMurrin, Kant took the position that “no matter what our sense-experience was like, it would necessarily be smeared over *space* and drawn out in *time*” (1957, Part 2, p. 220).<sup>2</sup> Implied here is the categorical distinction between *what* we observe — the circumscribed objects — and the *medium* through which we make our observations. We observe objects *by means of* space; we do not observe space. Kantian space is rooted in Plato’s notion of the “receptacle.”

In the *Timaeus*, Plato asserts that “we must make a threefold distinction and think of that which becomes, that in which it becomes, and the model which it resembles” (1965, p. 69). The first term refers to any particular object that is discernible through the senses. The “model” for the transitory object is the “eternal object,” i.e., the changeless form, archetype or idea (*eidōs*) that furnishes the template for the work of the Demiurge, the god or

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<sup>2</sup>In exploring dimensionality, my primary focus will be on its *spatial* expression. The systematic treatment of time is beyond the scope of this paper.

“divine subject” who creates the particular objects. And “that *in* which [the object] becomes” is what Plato calls the “receptacle.” Plato’s trichotomy generally corresponds to the terms we have been working with: the subject, the object, and now, the containing medium of the objects, the receptacle. He describes the latter as “invisible and formless, all-embracing” (p. 70); it is the container of all changing forms that itself does not change (p. 69). Plato goes on to characterize the receptacle as *space* (pp. 71–72). The Platonic notion of space constituted the seed for a concept that was to come to fruition and play a critical role in post-Renaissance science and mathematics. The key to a deeper understanding of classical space was given by Plato himself. It lay in his belief that the receptacle itself can have no holes or discontinuities (see Graves, 1971, p. 70).

Elsewhere (Rosen, 1988, 1994), I have examined the notion of classical dimension in detail, and have focused on the idea of the *continuum*. Space, in its essence — the space of Plato, Euclid, Descartes, and Kant — is continuity, and continuity entails extendedness. Consider, as an illustration, the one-dimensional space represented by a line segment. In the classical approach it is self-evident that the line, however short, has extension. It must then be continuous: it can possess no holes or gaps in it, since, if the point-elements composing it were not densely packed, we would not have a line at all but only a collection of extensionless points. The quality of being extended implies the infinite density of the constituent point-elements.

Yet, at the same time, reflection discloses that the classical continuum possesses a property that prompted the mathematician Charles Muses (1968) to refer to it as a “*discontinuum*.” For the absence of gaps not only holds space together but also permits space to be indefinitely divided. Without a gap in the line to interrupt the process, there is no obstacle to the endless partitioning of it into smaller and smaller segments. As a consequence, though the points constituting this continuum indeed are densely packed, they are distinctly set apart from one another. However closely positioned any two points may be, a differentiating boundary permitting further division of the line always exists. As Capek put it in his critique of the classical notion of space, “no matter how minute a spatial interval may be, it must always be an *interval* separating two points, each of which is *external* to the other” (1961, p. 19).

The infinite divisibility of the extensive continuum also implies that its constituent elements themselves are unextended. Consequently, the point-elements of the line can have no internal properties, no structure of their own. An element can have no boundary that would separate an interior region of it from what would lie on the outside; *all* must be “on the outside,” as it were. In other words, the classical line consists, not of internally substantial, concretely bounded entities, but only of abstract boundedness as

such (Rosen, 1994, p. 92). Sheer externality alone holds sway — what Heidegger called the “‘outside-of-one-another’ of the multiplicity of points” (1962, p. 481). Moreover, whereas the point-elements of classical space are utterly unextended, when space is taken as a whole, its extension is unlimited, infinite. Although I have used a finite line segment for illustrative purposes, the line, considered as a dimension unto itself, actually would not be bounded in this way. Rather than its extension being terminated after reaching some arbitrary point, in principle, the line would continue indefinitely. This means that the sheer boundedness of the line is evidenced not only locally in respect to the infinitude of boundaries present within its smallest segment; we see it also in the line as a whole inasmuch as its infinite boundedness would be infinitely extended. Of course, this understanding of space is not limited to the line. Classically conceived, a space of any dimension is an infinitely bounded, infinitely extended continuum.

Naturally, it would be a category mistake to interpret the infinitude of classical space as a characteristic of what is *object*. Again, space is not an object but is the context within which objects are manifested. It is within the infinite boundedness of space that particular boundaries are formed, boundaries that enclose what is concrete and substantial. The concreteness of what appears within boundaries is the particularity of the object. Let us say, in short, that an object most essentially is that which is bounded, whereas space is the contextual boundedness that enables the finite object to appear.

We have seen, moreover, that the spatial context is what mediates between object and *subject*. This third term of the classical account corresponds to the *unbounded*. According to Descartes, whereas objects are extended in space and therefore fully constrained by its laws (viz. the laws of motion), the subject is utterly unextended, thus freely transcendent of space. It is before this unbounded subjectivity that bounded objects are cast (the word “object” comes from the Latin, *obicere*, “to cast before”). In sum, the crux of classical cognition is that of *object-in-space-before-subject*. The object is *what* is experienced, the subject is the transcendent perspective *from* which the experience is had, and space is the medium *through* which the experience occurs. Note here the special role played by the continuum. It is the continuity of space, its absence of gaps, that confers closure. Objects are sealed into their containing space and are thus sealed off from the uncontained subjectivity before which they appear.

Extant mathematical thinking unquestioningly adheres to this classical structure. There is the mathematical object (a geometric form or algebraic function), the space in which the object is embedded, and the seldom acknowledged subjectivity of the mathematician who is carrying out the analysis. It is no different when mathematicians feel obliged to invoke “higher dimensions” of space. Extra dimensions are summoned into being by

extrapolation from the known three-dimensionality of the objective physical world. This procedure of dimensional proliferation is an act of abstraction presupposing that the nature of dimensionality itself is left unchanged. In the case of the Klein bottle, the "fourth dimension" required to complete its formation remains an extensive continuum, though this "higher space" is taken as "imaginary"; the Klein bottle, for its part, is regarded as an "imaginary object" embedded in this space (whereas the cylindrical ring, Moebius surface and torus are "real" mathematical objects in the sense that tangibly perceptible models of them may be successfully fashioned in three dimensions). Whether the mathematical object must be approached through hyperdimensional abstraction or is concretizable, the mathematician's attention is always directed outward toward an object, toward that which is cast before his or her subjectivity. To repeat, subjectivity itself is the detached position *from* which all objects are viewed, or better perhaps, from which all is viewed as object. Never is subjectivity *as such* opened to view. In this way, the classical split between object and subject is upheld and the rule of the predicating "I" prevails.

### *The Nonclassical Character of the Klein Bottle*

In his phenomenological study of topology, the mathematician Stephen Barr advised that we should not be intimidated by the "higher [i.e., purely theoretical] mathematician . . . We must not be put off because he is interested only in the higher abstractions: we have an equal right to be interested in the tangible" (1964, p. 20). There is a tangible fact about the Klein bottle likely to be neglected by the "higher" mathematician, an intuitively discernible feature that makes one wonder how appropriate it is to treat this structure simply as an imaginary object embedded in four-dimensional imaginary space. To bring out the property in question, I will compare the Klein bottle with the *tesseract*, a mathematical entity frequently used as an example of a four-dimensional structure.

The tesseract is taken as an imaginary extrapolation of a three-dimensional cube to four spatial coordinates. Each of the "faces" of this hypercube is itself a three-dimensional cube defining the lower limit or boundary of the higher-dimensional structure (just as the real three-dimensional cube is bounded by two-dimensional surfaces). Were a hypercube face to be viewed from the three-dimensional vantage point, *only* a cube would be perceived, since such a face is a closed form, complete in itself and totally indistinguishable from any ordinary cube. Not the slightest hint would be given of hyperdimensional extension. In short, the tesseract is a purely imaginary higher-dimensional entity with a lower-dimensional boundary condition that is real. Given the sharp division between real and imaginary portions of this struc-

ture, it would be impossible even to approximate a tangible model of a hypercube in three-dimensional space. The only portion of it we could realize there would be the ordinary cube.

In contrast to the tesseract, the Klein bottle is not *purely* imaginary, since, as we have found, a model of it can indeed be approximated in real space. But we also have discovered that, unlike the torus, the construction of the Klein bottle cannot properly be completed in three-dimensional space, that the model necessarily will intersect itself, creating a hole — something that would not have to happen if another dimension were available to finish it. It is this curious “dimensional hybridity” of the Klein bottle that is bypassed in the abstractions of standard mathematical analysis. Because the standard approach has presupposed the extensive continuity of dimension since the time of Plato, it cannot come to terms with the reality that lies *between* dimensional continua; that is, it cannot handle the phenomenological fact of a structure that is neither concretely containable in the three-dimensional continuum (as is the torus) nor simply associable with an imaginary four-dimensional continuum (as is the tesseract). The inherent *discontinuity* of the Klein bottle lies in the hole created by its self-intersection. We have seen that conventional mathematics circumvents this necessary hole by an act of abstraction in which the Klein bottle is treated as a properly closed object embedded in a higher-dimensional continuum. Also implicit in this classical approach is the detached subjectivity of the mathematician before whom the object is cast. I suggest that, by staying *with* the hole, we may bring into question the classical conception of object-in-space-before-subject.

Let us look more closely at the hole in the Klein bottle. This loss in continuity indeed is *necessary*. One certainly could make a hole in the torus, or in any other object in three-dimensional space, but such discontinuities would not be necessary inasmuch as these objects could be properly assembled in space *without* rupturing them. It is clear that whether an object like the torus is cut open or left intact, the space containing that object will remain closed; in rendering such an object discontinuous, we do not affect the underlying continuity of the space in which it is embedded. With the Klein bottle it is different. Its discontinuity does speak to the continuity of three-dimensional space itself, for the necessity of the hole in the bottle indicates that space is unable to contain the bottle the way ordinary objects are contained. We know that if the Kleinian “object” is properly to be closed, assembled *without* a hole, an added dimension is required. Thus, for the Klein bottle to be accommodated, the three-dimensional continuum must in some way be opened up, its continuity challenged. Of course, we could attempt to sidestep the challenge, to skip over the hole by a continuity-maintaining act of abstraction, as in the standard mathematical analysis of the Klein bottle that disregards the bottle’s “dimensional hybridity.” Assuming we do not employ

this stratagem, what conclusion are we led to regarding the “higher dimension” that is required for the completion of the Klein bottle? If it is not an extensive continuum, what sort of dimension is it? Earlier I hinted that the Klein bottle’s “missing dimension” engages the *inner* dimension of human being; it is not just another framework for reflecting upon objects but a dimension entailing the prereflective depths of our subjectivity. Let me now attempt to make this clearer.

We have seen that the classical paradigm presupposes a threefold categorial disjunction: contained object, containing space, uncontained subject. The contained constitutes the category of the finite particular, the empirically factual, the immanent contents that are reflected upon; the containing space is a normative universal serving as the means by which reflection occurs; the uncontained is the transcendent agent of reflection. It is only when we adhere to this Platonic/Kantian trichotomy that the idea of dimension is associated exclusively with the second term, the continuum. This tripartite division is confounded by Kleinian dimensionality. The necessity of the hole in the Klein bottle suggests that, in actuality, the bottle is not a mere finite particular object, not simply enclosed in a continuum as are ordinary objects, and not opened to the view of a subject that itself is detached, unviewed (uncontained). Rather than being contained in space, the Klein bottle may be said to *contain itself*, thereby superseding the dichotomy of container and contained. Rather than being reflected upon by a subject that itself remains prereflectively out of reach, the self-containing Kleinian object may be said to *flow back into* the subject. These paradoxical relations can be discerned in a helpful schemata for the Klein bottle provided by the communications theorist Paul Ryan (1993, p. 98). My adaptation of Ryan’s diagram is given in Figure 7.

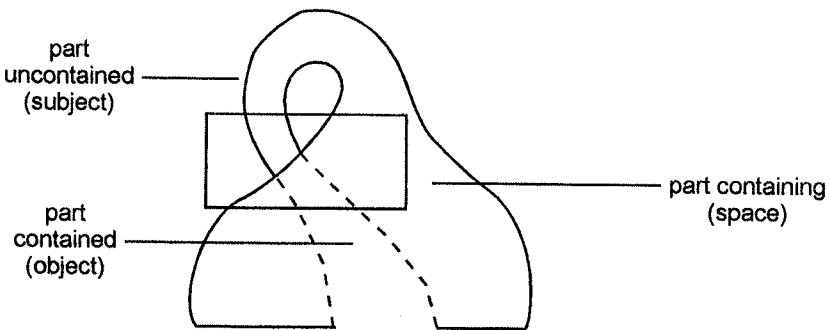


Figure 7: Parts of the Klein bottle (after Ryan 1993, p. 98).

Ryan identifies the three basic features of the Klein bottle as “part contained,” “part uncontained,” and “part containing.” Restricting our attention to the region marked off by the rectangular box, we have the appearance of simple containment and uncontainment. But when the frame is removed, we see how the part contained opens out (at the bottom of the figure) to form the perimeter of the container, and how this, in turn, passes over into the uncontained aspect (in the upper portion of Figure 7). The three parts of this structure thus flow into one another in an unbroken movement. Symbolized here in two dimensions is the process by which the reflected upon three-dimensional Kleinian object, in the act of containing itself, is transformed into the prereflective, four-dimensional — that is, *inner*-dimensional — subject.

Elsewhere, I noted the resemblance of the Klein bottle to the hermetic vessel of old alchemy (Rosen, 1995). The design of the enigmatic vessel is essentially that of the *uroboros*, the serpent that consumes itself by swallowing its own tail. To contain itself, the serpent must intersect itself, an operation requiring a hole (corresponding to the opening that is its mouth). The hole in the Klein bottle is of this sort. It is neither solely a hole in a container, nor a hole in that which it contains, but the hole produced by the act of *self*-containment that integrates the container with its contents in this way giving (w)holeness.

The process that took place in the alchemical vessel was often described as a “circular distillation” (Jung, 1955–56/1970, par. 8), a transformative circulation of substances “that was in some way turned back upon itself” (Jung, 1942/1967, par. 185). It is the fluid Kleinian circulation — from contained object to containing space back to uncontained subject — that unites the reflective and prereflective in an embodiment of ontological paradox. The “uroboric” Klein bottle is a reflected-upon content that, in containing itself, flows unbrokenly back into its own prereflective ground. That ground is the Klein bottle’s “missing dimension.” We may indeed say that *all* reflected upon contents originate in the prereflective. But in the case of an ordinary content, we cannot move back into its ground without obstruction because this content appears simply contained, closed into its spatial container in such a way that it is closed off from its prereflective source. Only a *self*-containing object of reflection can incorporate its prereflective origin without a break.

It should be clear by now that we cannot end the rule of reflection merely by attempting to break with it, since such breaking is itself reflective in nature. This realization finds expression in the general strategy I have employed: to abide in the reflective mode, to carry out the concretization of ontological paradox within reflection’s own province. By thus challenging reflection from within itself, by following its very own trajectory of self-questioning, we have arrived at its “inner horizon,” its natural point of termination, its true end. Of course, the true end of reflection cannot *merely* be an

end, since it would then be but the outcome of reflection! For reflection truly to end, we must have paradox — an end that is *not* an end, a boundary that is not a boundary. It is this that is embodied in the Klein bottle. At the “inner horizon” or “boundaryless boundary” of reflection, we flow beyond reflection, engage the prereflective, while yet continuing to reflect; in superseding reflection from within itself, we never break contact with it. Like the movement from one side of the Moebius strip to the other that paradoxically keeps us on the *same* side, our Kleinian movement from reflection to prereflectivity at once maintains the reflective. But now, instead of one-sided domination by reflection, there is harmony with the prereflective.

### Making Paradox a Concrete Reality

I hasten to admit that the foregoing words about the Kleinian embodiment of ontological paradox may themselves seem rather *disembodied*. What can we do to make them more concrete?

As a first step, let me acknowledge that, until now, I implicitly have been assuming the very classical posture I have sought to question. As noted above, in the classical situation of object-before-subject, only the object is open to view; the subject remains detached, out of reach, anonymous. And this is essentially how I have approached the “object” of central concern in this essay, viz. *wholeness*. In maintaining my own anonymity, in failing to situate *myself* in this text as the subject before whom wholeness is “cast,” I have let wholeness appear as a free-floating abstraction. Then it seems that if I am truly to challenge the classical stance, I must make wholeness less remote by recognizing in explicit terms that, rather than standing before some anonymous subject, it stands before *this* subject. That is to say, wholeness is the content of *this text*; it appears before me, the one who writes these words, and before you who reads them. To be sure, I state the obvious, but it is precisely the obvious that we lose sight of when we are lost in abstraction. Thus brought down to earth, the question of realizing wholeness, of embodying ontological paradox through the Klein bottle, becomes one of whether this text we are working with, being Kleinian in character, can lead us back into the prereflective ground from which this reflection of ours originates, and can do so without a break, thereby surmounting the exclusive rule of reflection.

The classical text operates squarely within the reflective mode and raises no questions about doing so. Here the word or sign, whose signifier serves as surrogate for the subject (the writer and/or reader), refers solely to what is other, making this signified object of reflection explicit, a well-bounded content closed into its context. The signifier/subject per se remains *implicit*; it does not meaningfully refer to itself. Is classical reflection effectively challenged in modernist or postmodern deconstructionist writing? I suggest it is not.



It is true that the modernist sign is self-referential. In modernism, attention is withdrawn from the end-products of reflection and meaning is relocated in an abstraction of the process itself. We see this in intensely self-involved psychological works such as Joyce's *Ulysses*. In fact, we may say that modernism as such is "psycho-logical": it seeks to apply *logos* to the *psyche*, i.e., to gain explicit knowledge of subjectivity. Here the sign is turned back upon itself so as to bring to light what formerly had been strictly implicit. In the language of psychoanalysis — that exemplar of modernism — the goal is to "make the unconscious conscious." Stated most essentially, modernism wants to turn the classical subject into an object.

In carrying out its program, does modernism genuinely surpass classicism? What actually happens is that classicism is *preserved* at a higher level of abstraction. For, in making the old subject explicit, in rendering it a well-delineated content enclosed in its context, this object-*nee*-subject implicitly must be given to, must appear before, a new, higher-order subject. The self-reflection of modernism is indeed akin to gazing at the reflection of one's eyes in a mirror: what *had* been the gaze of the subject now itself appears as an object gazed upon by a subject that is one step removed from the original. The important thing to recognize is that this transformation of terms leaves completely intact the classical *relationship* of object-in-space-before-subject. Modernism thus poses no fundamental challenge to classicism. Modernism's self-referential sign, by turning the self into an other, in fact maintains in abstraction the classical *split* between self and other, between the signifier and its signified object.

In postmodernism, the ultimate consequence of modernism is recognized and played out. The crux of postmodernism, I suggest, is the realization that modernism's objectification of the subject is but the first term of an infinite regress. We have seen that, in modernism, the classical subject loses its privileged position as the unquestionable base of knowledge, as the transcendent, never-to-be-viewed perspective point from which all else is viewed. Once this subject is viewed, made explicit, objectified, cast before the perspective point of a newly implied, higher-order subject, *no* subject can securely hold its position. Having established that the classical subject can be turned into an object, the new, modernist subject should be susceptible to the same fate. The objectification of that subject would bring a still newer order of subjectivity with the same susceptibility, and so on, *ad infinitum*. And each time the subject is undermined by being made into an object, what had been object to that subject is also undermined. Ultimately then, we have neither subject nor object in any stable, abidingly meaningful form.

In the parlance of postmodern literary theory, the fixed relationships between particular signifiers and their signified meanings give way to the restless, ever-shifting text, the ceaselessly self-alienating application of the

sign to itself. Thus Spivak, echoing the outlook of Derrida, says that “[s]ign will always lead to sign, one substituting the other . . . as signifier and signified in turn” (1976, p. xix). In Derrida’s own words, knowledge must be understood as a field “of *freeplay*, that is to say, a field of infinite substitutions” (cited by Spivak, 1976, p. xix) in which identity fragments into sheer difference. I am proposing that the specific way this takes place is by a recursive process of self-referential mirroring in which, time and again, the signifier/subject is displaced by being made into the signified object of a newly implicit subject. Therefore, if we view the self-reflection of modernism as a mirroring that maintains in abstraction the classical relation of object-in-space-before-subject, postmodernism would then constitute an infinite repetition of this mirroring, one that maintains classical identity in such a way that, in the end, it also negates it.

The “field of infinite substitutions” constitutive of the postmodern text, the infinite regress of signs within signs within signs, is reminiscent of the old Ptolemaic *epicycles*. When the ancient Greek notion that heavenly bodies traverse perfectly circular orbits was called into question by new observations of the planets, instead of gracefully relinquishing the paradigm of the circle, this model was perpetuated for centuries in an artificial, ultimately unconvincing form. The orbits of planets were described in terms of epicycles, complex arrangements of circles within circles that gratuitously replicate the image of the circle. Today, the challenge to the status quo appears far greater than it was in Ptolemy’s time. What is now being called into question is no mere image we can reflect upon but the reflective posture itself, that expressed in the relation of object-in-space-before-subject. Unable to let go of this deeply ingrained habit of comportment, postmodernism carries it forward in its infinite regress of signs. The sterility of this is not lost on the postmodernists. In their abstract self-reflections, there is a distinct mood of disenchantment. Yet, because the postmodern writer can find meaning nowhere else, the rule of reflection lingers on, albeit in this negative, thoroughly self-subverting manner.

An alternative to postmodernism is intimated in Gendlin’s expansion upon Heidegger, noted earlier. Gendlin (1993) offers us a text that can reflect upon its bodily, *prereflective* source. “Speaking is a special case of . . . bodily living,” says Gendlin. “[O]ur bodies perform the implicit functions essential to language . . . . Our bodies imply our . . . linguistic meanings” (p. 34). Moreover, when we speak or write, the prelinguistic source of this activity is not simply left behind; it continues to operate in the very midst of our linguistic functioning. Thus, for example, “the most sophisticated details of a linguistic situation can make our *bodies* uncomfortable” (p. 34). Could we not reflect explicitly upon the *prereflective* source of our reflection? Let

us attempt such an act of self-reflection here, with the very words on this page. If Gendlin is correct, our reading of these words arises from our bodies, and since this prelinguistic source goes on functioning even as our words now turn back upon it, it seems we should be able to realize that source in a bodily way so that our words no longer appear as mere abstractions. This is what Gendlin means when he proclaims that “words can say how they work” (p. 29): they work from the body, and, becoming cognizant of their own bodily underpinning, they can link back to it. As in Gendlin’s approach, the words of the postmodern text do reflect upon themselves, but only *as* words, disembodied signs ultimately devoid of meaning. Gendlin points us beyond postmodernism. In Gendlin’s form of self-reflection, the text is not merely conscious of itself as a text, but calls attention to the concrete, pre-textual process from which it originates. Only by gaining access to the pre-textual, the prereflective, can we supersede the old trichotomy of object-in-space-before-subject and approach embodied wholeness. In Gendlin’s terms, the prereflective is “pre-separated” (1991, pp. 116–117); that is, it “comes before,” is more primordial than the divisions arising in classicism and perpetuated in modernism and postmodernism.

Yet a gap may remain between our reflection upon the prereflective and the prereflective itself. And where there are gaps, there is the continuing rule of reflection. I venture to propose that a *Kleinian* rendition of Gendlin’s text would be needed to close the gap.

First, let me emphasize that our post-postmodern text must be *paradoxical* in character. Again, what we are seeking to do is include in this reflection of ours the prereflective source of our activity, the “subtext” that normally is kept implicit. Our text — whose signifiers stand in for *ourselves* (for me, who writes these words, and for you, who reads them) — is to draw back in upon itself, make reference to itself without alienating itself, as happens with modernist and postmodern texts; in so signifying itself, this text cannot merely turn itself into an other that is cast before a newly implied, more abstract self. Does this mean that the self that is signified must be the *same* self that is doing the signifying? Yes and no. If the self in question were *simply* the same, our reflection would collapse into mere self-identity. As long as we are engaged in reflection, are working with a text, are writing or speaking and not merely remaining silent, there can be no *simple* self-identity. Yet, even though the very act of reflecting upon the self turns it into an other, it is possible for this other to flow right back into the same self from which it arises, rather than appearing *merely* as an other cast before a new self. Thus, the self-reflection I am describing would give us neither self nor other, in the categorical sense of these terms. We would realize instead their paradoxical interpenetration. And this is what we require to supersede the supremacy of

reflective predication. Signifier and signified would be more than reciprocally interdependent in such a self-reflective text. They would be identified, utterly one; yet they also would be two. By virtue of the latter aspect, reflection would continue; by virtue of the former, the “preseparated,” prereflective dimension would be brought into play.

However, for the gap between reflection and the prereflective to be closed in this way, the paradoxical return of signification to itself requires a signifier that possesses *sufficient dimensionality*. It is here that the Klein bottle plays its crucial role. Our work with this structure clearly is no exercise in “pure mathematics” in which a mathematical object is signified by a definition or algebraic formula. For us, the Klein bottle is not merely a signified object; it is a *signifier*, one that, indeed, paradoxically signifies itself. It is the *dimensionality* of this signifier that permits us to close the gap between the reflective and prereflective.

We have seen that classical reflection takes place in a context not exceeding three exterior dimensions, and I have proposed that — if we do not indulge ourselves in higher order extrapolations of reflective dimensionality in the fashion of modernism/postmodernism — the “fourth” dimension is the prereflective one that engages our inwardness. Of course, this bare statement about the prereflective in itself is merely reflective; the “prereflective fourth dimension” is the content of our predication but that abstract content is simply contained as what we reflect upon in the closed linguistic space of our discourse; from here, we cannot pass smoothly to concrete prereflectivity itself. This limitation derives from the fact that the signifiers we use to convey our “four-dimensional” content themselves lack sufficient dimensionality. By themselves, these words, the one-dimensional marks printed on this two-dimensional surface, are inadequate to make a reality of ontological paradox; they are but arbitrarily devised, conventionally agreed upon tokens that refer to their content in a merely external manner. The concretization of paradox I have carried out in this essay has effected an increase in the dimension of the signifier. We went from mere words of paradox (“I am not-I”) to its Necker cube and Moebius strip expressions. With each step, the dimensionality of the signifier increased and our expression of paradox became more internally embodied, but we were still working with mere symbols, reflectors whose prereflective content in fact remained abstract, being contained within our field of reflection. Only with the higher-dimensional Kleinian reflector can we surpass the primacy of reflection, for only the Klein bottle signifies the “fourth,” prereflective dimension by signifying *itself*.

It is the uroboric movement of the Klein bottle back into itself that produces the hole in it. Since this opening is the mark of self-signification, with it, the classical gap between signified and signifier in fact should be *closed*.

With the hole in the Kleinian text,<sup>3</sup> we should at once have *wholeness*. However, this will not happen if we continue to assume a reflective posture in our relation to our text; in that case, the (w)hole will appear as *merely a hole*, a breach in the text that renders it incomplete. Clearly then, we must change our posture, approach the Kleinian text in a different way. Specifically what way? How can we overcome the old, compelling tendency to turn whatever we signify into an object of reflection appearing “out there” before us, simply contained within its context and thus set apart from us? What must we do to allow the self-containing Kleinian signifier to signify itself by flowing right back into us?

I am proposing that the Kleinian text in truth cannot be simply contained. In containing *itself*, the Klein bottle should spill over the bounds of the context that would enclose it, flow backward to its own “four-dimensional” ground — *our* ground, we who read this text. Yes, as Gendlin would say, the prelinguistic source of these words continues to operate as we read them. And, with the dimensional enhancement of these paradoxical words that fleshes them out, makes them concrete, the gap between this reflection on the prereflective and its living source should indeed be closed. Thus, in properly completing our Kleinian discourse, this text we read would live within us as it stands before us, and would do so without interruption. But I ask again, how must we approach our text to complete it in this way?

Although the long-prevalent habit of classical reflection strongly disposes us to approach the Klein bottle as but an object of predication, this “object” does not lend itself to being predicated thus. The inherent character of the Klein bottle suggests that we adopt a “higher dimensional,” i.e. a *prereflective*, approach to it. This means, as Gendlin would say, that we are to obtain a “moody understanding” (1993, p. 30) or “felt sense” (1978) of our Kleinian text, a bodily cognizance that exceeds this text as a mere content we reflect upon; the “felt sense,” of course, is the prereflective awareness. It should be true that we could gain such a sense of *any* text, since all texts originate in the prereflective. But when the text appears closed into its context and thus closed off from its prereflective source (its “subtext”), the gap between the reflective and prereflective will persist. In the case of the Kleinian text, there can be no pretense that it is categorically divided from its “subtext,” for, as a

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<sup>3</sup>It should now be clear that what makes this text “Kleinian” is not merely its signification of the Klein bottle in words, schematic drawings, or objective models in space. By “Kleinian text,” I mean a text in which the Klein bottle serves as the medium for dimensionally extending these self-reflective words so that they can actually reenter their own prereflective ground. Here the higher-dimensional Klein bottle is embodied, not just as an object of signification, but as part of the signifying act itself.

text, it is incomplete. To complete it, we must follow its own natural trajectory into the “higher dimension” — into the living subjectivity that constitutes the origin of our reflection upon it. In this way, the Kleinian text comes alive, stands within us as well as before us. Our task is to surpass the long dominant habit of predication so that — in one unbroken movement — we may pass from a reflective understanding of the prereflective ground of this text to the ground itself. The Klein bottle uniquely mediates this surpassing. The hole in this Kleinian text is the “perfect size and shape” for our inwardness, and, like a “black hole in space” (a break in the classical continuum!), it draws us toward it, extending to us a pregnant invitation to fill it with the whole of our selves.

To put it differently, we may say that our Kleinian text requires us to perform a kind of *meditation* upon it. Though we may be strongly inclined to approach it by means of conventional symbolic operations, the Klein bottle itself suggests we do otherwise. We are called on to experience it, not just through perception or conception, but through *proprioception*.

Etymologically, to perceive is to “take hold of” or “take through” (from the Latin, *per*, through, and *capere*, to take), and to conceive is to “gather or take in.” It is through perceptual and/or conceptual activity that we work with the ordinary, simply contained text. The term “proprioceive” is from the Latin, *proprius*, meaning “one’s own.” Literally, then, proprioception means “taking one’s own,” which can be read as a taking of self or “self-taking.” The term finds its most common usage in physiology where it signifies an organism’s sensitivity to activity in its own muscles, joints and tendons. But Bohm (1994) spoke of the need for “*proprioceptive thought*” (p. 229), which he viewed as a meditative act wherein “consciousness . . . [becomes] aware of its own implicate activity, in which its content originates” (p. 232). Years earlier, the social psychiatrist Trigant Burrow spoke similarly of the need for human beings to gain a proprioceptive awareness of the organismic basis of their divisive symbolic activity (see Galt, 1995). What I propose here is that proprioception is the appropriate way to work with the Klein bottle, and that such a meditation is what the self-containing Klein bottle requires and invites. In thinking this Kleinian text, we must think proprioceptively, think our own thinking.

In my sense of the term, proprioception would not entail a realization of the self that cleanly transcends all symbolic operations; it would not lead to a state of “pure consciousness” in which all relations to objects are left behind. Like the *prajnic* meditation of the Southern School of Chinese Zen, Kleinian proprioception would not just involve sheer “nondiscrimination” but “non-discriminating discrimination,” to cite Suzuki again (1969, p. 60). This kind of proprioception is not undertaken *instead* of perception and conception; symbolic activity continues; it is this that we proprioceive. And while our

proprioception of the Kleinian symbol never brings sheer transcendence of it, we do fluidly encompass its presymbolic (“non-discriminating”) origin. The necessary hole in our Kleinian text calls neither for a continuation of symbolic mediation by itself, nor for the meditative immediacy of “pure experience”; rather, it invites what we may call *medi(t)ation*: the mutual permeation of externally mediated activity and internal self-realization — of reflectivity and the prereflective. Thus our proprioception would not be a pure self-thinking but a thinking of other that flows right through the hole in this Kleinian other and back into itself. Only in such a process, where we would not simply be seeking to break away from symbolic reflection, could we truly surmount its pervasive influence. And while the symbolic would no longer reign, through Kleinian proprioception it actually would reach culmination, for no longer would the symbol conceal the presymbolic ground that sustains it so as to maintain the false impression of being complete unto itself. In *recognizing* its own incompleteness as a simply autonomous entity, in *acknowledging* its roots in the presymbolic, the symbol would gain *authentic* completion. The Kleinian symbol would bring the symbolic to fruition by casting light on the aspect of it that previously had gone unsymbolized. Put in alchemical terms, the inside-out Kleinian vessel would be *bene clausum*: not only entirely open to its own prereflective source but — *because* of this openness — also entirely closed, complete unto itself.<sup>4</sup>

### Conclusion

In making wholeness a concrete reality, we are to read this text proprioceptively; read our own reading; read these words about passing beyond themselves (into their prelinguistic roots) in such a way that the passage actually takes place. To mediate such a reading, I have fleshed out this paradoxical text by dimensionally amplifying it via the Klein bottle. Now the body of our text does not consist merely of lifeless, empty symbols, intrinsically meaningless signifiers that can only point outside themselves to disembodied meaning; our text is the Klein bottle. It is in reading the (w)hole in this self-containing three-dimensional text that we should pass unbrokenly into its “fourth-dimensional subtext.” The Klein bottle’s incompleteness when it is read classically, is at once an incompleteness in our symbolizing of it. In accepting the invitation to proprioceive the Kleinian text, we complete our symbolic activity by circling back into its presymbolic origin.

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<sup>4</sup>Elsewhere, I have shown that the self-realization of the three-dimensional Kleinian structure is actually not the final word in dimensional development. I have intimated that the Klein bottle not only opens inwardly to its own “fourth-dimensional” ground, but also, that it opens beyond itself to still higher dimensional embodiments of paradox. See Rosen, 1994.

But old habits do persist. *Can we read our own reading? Can we read the hole in the Klein bottle in such a way that we relax the compulsion to regard it as merely a hole, a gap in an ordinary object simply contained in space? Can we read the hole in the Klein bottle as an opening to a "higher" dimension and read that dimension as the prereflective source of our very own reading? Can we enter that dimension through proprioception? I believe it is a matter of proceeding medi(t)atively, from "both sides at once" — from the mediative side of the conceptual, and from the side of experiential immediacy known in meditation. The Kleinian concept brings us to the limit of the conceptual. Because the true boundary of our symbolic activity must be paradoxical, a boundary that is not a boundary (lest we continue in the boundary-making mode of the symbolic), it is precisely at this inner horizon that the conceptual and the experiential can flow into one another without interruption. It is here that we can realize the intimate harmony of language and silence, of outside and inside. Is this not the harmony of *prajna*, the paradoxical (w)holeness of the finite and the infinite intimated in Chinese Zen?*

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