Abstract for **Marcel Duchamp's *Tu m'* (1918): A Visual Inquiry into Perception**

    This paper addresses the confounding process of accurately perceiving works of art, whether flat or multi-dimensional. At its basest level, visual art is a perceptual game. The first question the spectator considers is "What am I looking at"? I begin this paper by demonstrating the utility of *Tu m'*, the last oil painting by Marcel Duchamp (1887-1968), as a perceptual-skills test, rather than as an inventory of earlier works. Using *Tu m'* as the case study, I next explore the implications of three perceptual theories that are readily applicable to works of visual art: the Snapshot Conception of Perceptual Phenomenology, the Qualia Theory of Perception, and the Enactive Approach to Perception. Since none of these theories sufficiently accommodates the perceptual problems introduced by *Tu m'*, I recommend a fourth option, which merges aspects from the two latter views. This solution, which I term the Enhanced Enactive Method enables its practitioners to perceive more aspects, especially unreportable ones. While the gap between what appears and what is actually present (Duchamp similarly juxtaposed apparition and appearance) can never be absolutely eliminated, this perceptual theory arouses greater sensitivity to the problems associated with perceiving art, while offering extra tools to overcome overlooked obstacles.

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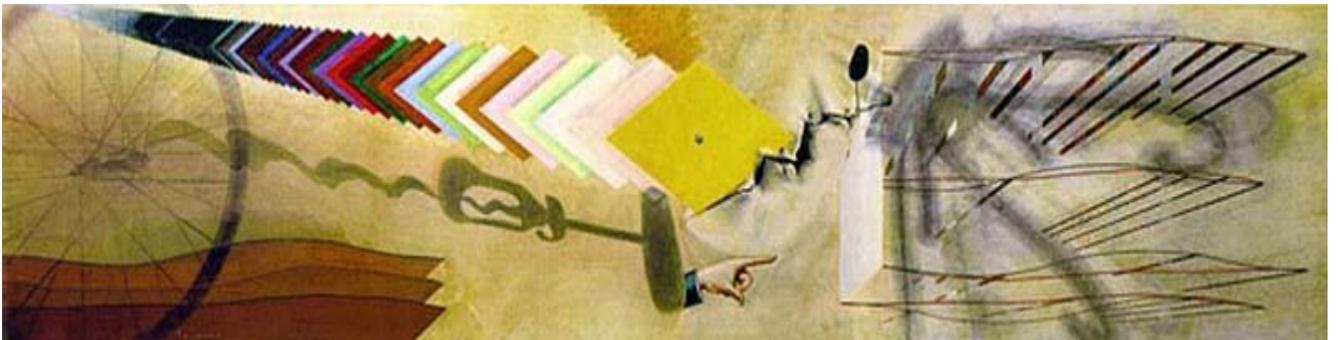
Fig. 1 Photographed From Below: The Bottle Brush Slopes Upward, mimicking the rays on the painting's right side. This image is similar to the one used in Marcel Duchamp's catalogue raisonné, *The Complete Works of Marcel Duchamp*, ed. Arturo Schwarz (New York: Abrams, 1970).

Introduction

This paper addresses the confounding process of accurately perceiving works of art, whether flat or multi-dimensional. At its basest level, visual art is a perceptual game. The first question the spectator considers is "What am I looking at"? I begin this paper by demonstrating the utility of *Tu m'*, the last oil painting by Marcel Duchamp (1887-1968), as a perceptual-skills test, rather than as an inventory of earlier works, as he considered it. Using *Tu m'* as the case study, I next explore the implications of three perceptual theories that are readily applicable to works of visual art: the Snapshot Conception of Perceptual Phenomenology, the Qualia Theory of Perception, and the Enactive Approach to Perception. Since none of these theories sufficiently accommodates the perceptual problems introduced by *Tu m'*, I recommend a fourth option, which merges aspects from the two latter views. This solution, which I term the Enhanced Enactive Method enables its practitioners to perceive more aspects, especially unreportable ones. While the gap between what appears and what is actually present (Duchamp similarly juxtaposed apparition and appearance) can never be absolutely eliminated, this perceptual theory arouses greater sensitivity to the problems associated with perceiving art, while offering a few tools to overcome overlooked obstacles. Just as one's awareness of alcohol's capacity to impair driving compels one to minimize its consumption before driving, a greater awareness of sight's fallibility motivates one to actively explore this world, to pursue "what you have to do to see."[1] There may be certain perceptual features that one will always see *wrong*, but many are *correctible* oversights, such as seeing *Tu m'*'s white square as a trapezoid or seeing its safety pins' shadows as painted.

Even the artworld needs useful perceptual strategies, since misperception is one of its biggest problems, leaving art writers to pen irrelevant interpretations based on mistaken experiences.[2] Despite this perennial problem, the artworld fails to acknowledge its perceptual deficit, even though artists routinely make fun of critics' erroneous descriptions.[3] The kinds of "critics' errors" this paper views as perceptual problems include misreading foreshortening or depth relations (problems that become graspable as one gains experience viewing) and basic mistakes that when pointed out elicit the response: "Oh yeah, that's odd, I thought I saw it otherwise." Hardly ambiguous, such errors include: identifying the wrong color, scale, shape, or thing (resemblance, not associations). This paper is focused on

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perceiving art, not interpreting it, so language problems (multiple descriptions for the same referent or wrong term for right description) or connotative meanings are irrelevant here. Ludwig Wittgenstein's duck-rabbit case, whereby one sketch evokes three different referents (including "duck-rabbit"), does not pose a perceptual problem, so long as one is reporting a perception.[4] In the classic case of the morning star and the evening star, different names for the planet Venus do not indicate an erroneous perception.[5] Seeing "some sketch that depicts pointed ears, broad whiskers, and a long tail" as a cat is relevant, since it resembles a real thing, as compared to seeing a coyote as a trickster, which is an interpretation not a perception.

Some might argue that it is simply mistaken to transmute philosophies of perception into tools for perceiving of art, since perceiving the ordinary world is a very different case from perceiving works of art, especially since two-dimensional works render worldly experience devoid of both time and its third dimension. Visual art engenders a worldly experience that is presentational, rather than representational. One shares the same time-space coordinates as the work of art, so one has an experiential relationship with it that is no different than watching a friend chat across the room in a crowded party or snorkeling about an abandoned ship on the ocean floor. Alva Noë remarks that "[w]hat a picture and the depicted scene have in common is that they prompt us to draw on a common class of sensorimotor skills."[6]

In lieu of a public forum that openly addresses the consequences of art writers' impoverished perceptual skills, I aim to generate a perceptual strategy based on the philosophy of perception that art lovers can readily employ. Let's first consider *Tu m'* a tool for testing viewers' perceptual capacities, a not atypical ploy that visual artists enjoy employing to trick spectators.[7]

Tu m': A Tool for Testing Spectator's Visual Perceptual Skills

Despite Marcel Duchamp's repeated assertions that *Tu m'* is an inventory of prior works, it rather visualizes various *new* (for 1918) perceptual problems, such as rendering the 4th dimension, experiencing bi-color variations (color's variance adjacent others), depicting infinite space, as well as characterizing the rotatation of axes within a plane (anticipates 7- and 10-dimensional modeling).   As we shall later see, the only perceptions that most published art historians report are the three shadowy figures (the wheel, corkscrew and hat rack), which they consider shadows cast by readymades (in line with its role as an

inventory and Duchamp's published notes). In failing to recognize that this wheel is not Duchamp's readymade or that this hat rack is not a shadow, they affirm its utility as a visual skills test. Not unlike those perceptual games that require participants to determine which other shapes visually match some standard, this painting proposes several trials.[8] Seen as an inventory of prior works, Duchamp's first test implicitly requests viewers to compare painted imagery to extant samples. This exercise, which is premised in faulty claims (correspondence between image and samples) not only contests perception from the onset, but it would have been an impossible task in 1918, since none of the works (*Bicycle Wheel* (1913/1951), *Three Standard Stoppages* (1913-1914), or *Hat Rack* (1917/1964)) memorialized in *Tu m'* would be publicly known for at least another 20-50 years.[9]

Several perceptual tests explore viewers' spatial skills. Noticing the resemblance between the lower-left hand side's three brownish slats and the right-hand side's ethereal curved black and red bands requires viewers to flip the slats around (backwards and upside down) in one's imagination (or use tracing paper as I have done) to generate four pairs of floating curves, which turn out to be two pairs of two identical pairs.[10] Given the white plane hovering perpendicular to the painting's surface, this painting investigates whether viewers can read this twisting 3-D plane rendered as a 2-D trapezoid (free from linear perspective). One can infer from Duchamp's 1914 notes that those columns of parallel circles encircling the light beams investigate viewers' recognition of the 4th dimensional continuum, which Duchamp considered to be generated by a "*finite 3-dim'l continuum rotating (here the word loses its physical meaning- see further on) about a 2-dim'l hinge.*"[11] Finally, the test that would have attracted the most witnesses concerned the trompe l'oeil tear (painted so realistically that it seems actual) in the canvas, held together by 3 over-sized safety pins, whose realistically-rendered shadows co-exist with numerous actual shadows, depending on its lighting conditions.

In addition to its playful perceptual teasers, *Tu m'* explores color interactions (the accordion-like stack of color swatches affixed with a bolt), rotates axes to evoke various vantage points, generates ambiguous space, features a finger pointing at virtual space, characterizes refracted light and foreshortening, and presents real, imagined, and flattened space. It is no less difficult today, let alone in 1918, to report this painting's imagery, to "see them as *x*," where *x* stands for one of Duchamp's classic works or one of that

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era's perceptual schemes. But, to "see them as *x*" requires prior knowledge of the concept of *x* (*x* =

Three Standard Stoppages, Bicycle Wheel, Hat Rack, bi-color interaction or rendering 4-D imagery). This

would have been especially difficult prior to these works' first public appearances in 1936, 1951, and

1964, respectively.[12]

   This paper demonstrates that these images' referents must already be present in the world, rather than

awaiting some future appearance, as the explanation of an *imperceptible* inventory suggests. Let's next

analyze several perceptual theories to see which one *works best* in terms of discerning what is really

present from what appears when experiencing an artwork, such as *Tu m'.* This theory must account for

the facts that artworks often double as deceptive perceptual tricks, lighting and shadows alter works'

colors, and viewers' experiences change as they move about the room, making it all the more difficult to

distinguish what is actually present (appearance) from what appears (apparition).

Discerning the Perceptual Theory that *Works Best* for Visual Art

   While there are multiple perceptual theories, I focus here on three that seem particularly appropriate

for the art experience: the Snapshot Conception of Perceptual Phenomenology, the Qualia Theory of

Perception, and the Enactive Approach to Perception. Since art experiences occur in the world, an

appropriate theory must likewise situate itself on the worldly side of the mind/world perceptual divide. I

thus selected these three, since they're premised on the existence of looks, qualia, or P-properties,

avoiding mental entities such as mental representations, sense data, or subpersonal content. On the

surface, the snapshot conception, whereby visual experience appears in "sharp focus, uniform detail, and

brilliant color" seems to concur with our everyday sighted experiences.[13] If there is too much to see in

one vista, we shift our head, snapping multiple shots, as it were, collecting more frames, so that we can

assemble a full picture of the scene.

   One can easily imagine art writers moving about the room, taking their time to look around,

considering every angle, as they compile the work's complete picture. Our art writer turned scene

surveyor would no doubt believe that he/she had spent so much time looking, enquiring, and noting that

the resultant encompassed an objective characterization of the work at hand, for there would be no

reason to doubt otherwise, unless another surveyor challenged his/her findings. Several problems arise

with this characterization, however well intended. For one, our failure to doubt our visual apparatus generates a false sense of confidence. *Change blindness*, whereby people fail to notice an object's color change even as they stare at it happens often.[14] In fact, video artists like Joey Versoza, Bill Viola, and Sam Taylor-Wood have recently produced real-time videos where nothing seems to happen (they're so lifeless I term them "still video"), which unwittingly test change blindness.

That "still videos" annoy the heck out of viewers demonstrates sight's fallibility, since these artists promise that plenty is happening, yet viewers, however patient, cannot detect it.   One discovers our inability to witness change at a very young age, the moment our parents fail to explain the magician's sleight-of-hand. There are several oft-discussed tests for a variation of this problem called *inattentional blindness*, whereby viewers are so focused on one aspect that they fail to notice something else happening. For example, people watching a video of a basketball game do not notice a person in a gorilla suit entering the court, which demonstrates how capturing people's attention causes them to miss something happening right under their noses, the same tactic magicians utilize.[15]

To account for sight's apparent clarity, despite its obvious deficiencies, some snapshot conception adherents think we have "detailed pictures in mind."[16] Elements stored from past visual experiences contribute to present perceptions. Whenever there's not enough data present to produce a detailed picture, the brain fills in the rest, not unlike the way the blind spot works. It's difficult to imagine how this works with unfamiliar artworks, let alone familiar ones. Even people who just cast a passing glance at a work of art compile pictures on par with the scene surveyor, who is now only casting a passing glance. When casually viewing a work, one doesn't see more details, simply because one has seen them before. One notices specific aspects only when one stops and focuses one's attention toward that aspect one is studying. Only then might a spectator suddenly recall some details that he/she does not currently notice, but now remembers to search out.

When dealing with art, even a famous work like *Tu m'*, few people could memorize enough of it to store its details for recall later. As this paper argues, perceiving unfamiliar works of art is indeed difficult. What changes over time (with repeat viewings) is that we notice different aspects (we report new perceptions). One might opt to break perceiving an artwork down into parts, that is to "see sections of

the snapshot as an *x*," which requires identifying some *x,* or at least knowing about some *x*'s existence and its relevance to the scene in sight. From my cursory description of *Tu m'* above, one realizes that it is still immensely difficult to identify this canvas's many x's (extant Duchamp works; 4-D, let alone 3-D rendering on a 2-D surface; the significance of the color swatches; or refracted light beams), save perhaps the elongated shadow of a corkscrew, the hand, or the trompe l'oeil tear in the canvas, fastened however unnecessarily by real safety pins.

   Even in the case of a more recognizable artwork (straightforward landscapes or portraits), where one can easily describe the contents of one's snapshot view, the snapshot conception encounters difficulties. Scientific research indicates an enormous discrepancy between the input and output that engenders our high-resolution, colorful world. Perceptual experience is actually "fragmentary, discontinuous, and sparsely detailed." For these reasons Alva Noë comically comments that "you do not actually enjoy the experience you think you do."[17] With so few photoreceptors on the periphery of our visual field, humans have very poor parafoveal vision. This explains why we have difficulty determining a playing card's color, when held out at arm's length just within our field of view.[18] Eager to compensate for the gap between input and output, scientists, according to Noë, "suppose that our experience is picture-like *because* we experience what is represented by a picture in the head, a picture that is constructed from the starting point of the retinal picture."[19]

   How could this "picture in the head" model accommodate the recognition that each art experience is novel, even with repeat viewings of the same object?[20] The snapshot conception clearly requires too much filling in, given our meager starting point, the "retinal picture."   Despite its potential for objectivity (observations are easily challenged), the snapshot conception doesn't work for art, whose tendencies toward unfamiliarity and unmemorizability make storing "pictures in the head" quite difficult. Given our physically-limited starting point, it would be especially difficult to discern the difference between what appears and what is actually present.   As an alternative to the theory that details are stored in one's head, where "the world is represented in full detail in consciousness," Noë and many others contend that the details are present only *virtually*, just as we access a distant server's content via our laptop's wi-fi connection.[21] That is, they're always present in the world, which facilitates total access all the time. In

the case of art, we access the visual field by looking around. We will return to this explanation when we consider the enactive approach, which shares the snapshot conception's reliance on an active exploration of the world. Let's next explore the Qualia Theory of Perception.

There are several versions of the qualia theory, whose inspirations stem from Wilfrid Sellars' having distinguished sensible from sensory qualities (currently called qualia), after Alfred North Whitehead's characterizing the percipient's body's organic experiences as mediating *qualities* of environing events.[22] Qualia therefore convey the magnitude of a subjective affective quality caused by some perceptual experience. Under the qualia theory, the experiential quality of redness is a property of the experience— "one that (partly) fixes what it is like to have the experience, and one that is immediately revealed or overt in the experience. From the standpoint of the qualia theory, two individuals who are identical in all behavioral dispositions (including their sensorimotor skills and discriminatory capacities) could differ in what it is like for them to experience something red looking."[23] A single color's subjective sensations are known as the inverted spectrum hypothesis, which characterizes the situation in which colors look different to different people, yet these different experiences go undifferentiated, since viewers reference the same color to describe different experiences.[24] For example, "looking red" gives rise to particular experiences with certain qualitative or sensational properties. One person's red-experience actually looks orangish, while the other's appears rosy.

As Noë cautions, such *apparent colors* are what qualia theorist Christopher Peacocke calls "sensational properties of experience, namely, properties of what it is like to have the experience that are not (really) properties the experience presents the world as having."[25] Noë remarks that despite its inability to distinguish actual from apparent colors, the qualia theory has "the virtue of phenomenological plausibility." Qualia theorists recognize that the way we represent the world (experienced apparent colors) shapes the actual experiences we have. So, if this red really looks orangish to me, red-experiences are orangish.

Peacocke follows the late Gareth Evans in differentiating conceptual from nonconceptual content, thus continuing the project of viewing perception as giving rise to subjective affects, which are either propositional or phenomenal, respectively.[26] Evans considers conceptual contents to be "the type of

contents that can be the objects of propositional attitudes and the meanings of sentences." [27] Most

relevant to our understanding of an artwork, Evans considers a perceptual experience's phenomenal

content to be given in terms of nonconceptual content,[28] which John Campbell links to "biological

information processing."[29] Peacocke's project to understand nonconceptual content has potential

applications for *Tu m'*, especially since, as described above, this painting's imagery is mostly phenomenal

(what Evans termed nonconceptual), not propositional. Hardly rigid categories, the notions of conceptual

and nonconceptual are defined by users, since content that one viewer considers nonconceptual can often

be conceptualized by another. Similarly, Barthesian commutability renders all concepts nonconceptual,

but this is an issue of interpretation, not perception. Recall my recommending that one "see sections of

the snapshot as an *x*" as a way of getting around the impossible task of identifying the totality of an

artwork's unfamiliar imagery, its nonconceptual content, which we perceive, but cannot (yet) articulate.

Returning to Peacocke's effort to revive Evans' distinction, Peacocke considers perception a two-step

process, whereby perception has two moments—"how things appear and the encounter with how things

are:"[30]

Peacocke's characterizing experience as having both representational content (a complete description

of the visual experience) and qualitative features (sensational properties that are what it is like to have an

experience) empowers art writers and aestheticians to focus their critical acumen on the work's

conceptual content, what the experience represents, rather than panic over inexplicable sensational

properties. [31] Since most aestheticians seem to endorse some version of actual intentionalism, "according

to which the author's intention, when successfully executed, determine—or constrain, at least—the proper

interpretation of her work," I imagine them dreading unreportable sensations beyond their immediate

grasp.[32] Those philosophers who sanction the view that an artist's intentions can be articulated must

either wait a very long time until art writers have transformed content presented initially as nonconceptual

into conceptual content or they must avoid alien situations altogether. Peacocke's affirming the co-

presence of conceptual and nonconceptual content solves this problem for committed actual

intentionalists.[33]

Although Peacocke's position indeed aids the art writer's capacity to navigate foreign territory, his project becomes suspect once he comments that differentiating a tree at a distance from a nearby tree is veridically impossible when both are the same height. This paradox problematically leads him to categorize scale, or "size in the visual field," as a "sensational property," a nonrepresentational feature of experience.[34] As Noë remarks, the perspectival size of an object depends on the distance to the perceiver, as well as the height (the tree's height) necessary to perfectly occlude the object from view (given that the sight line is the hypotenuse of a right triangle).[35] Ultimately, we experience the world by experiencing how it looks.

This brings us to the qualia theory's most problematic feature, its claim that sensory modalities differ qualitatively. That is, sight differs from touch, "because there are introspectibly accessible differences between experiences of seeing and touching."[36] Were qualia theorists to consider touch and sight mutually-interdependent, they would recognize that touch serves as "the basis for experience of *a spatial* manifold of objects in just the same way vision can. In having these experiences—tactile or visual—we can rightly take ourselves to be brought in contact with a spatial manifold."[37] The enactive approach goes so far as to argue that our familiarity with tactile experiences enables us to discern the magnitudes of sight's spatial vectors. "Vision is touch-like."[38]

Thus far, we have seen that the qualia theory and snapshot conception are prone to inaccuracy, mostly because they view visual perception as exclusively sight-oriented, not multi-sensory; and they consider the object of perception as independent of the viewer's spatial position. Such theories assume uniform perceptual skills among spectators, rather than varying degrees of perceptual experience that influence each person's capacity to grasp particular situations. An alternative view, the enactive approach relies upon know-how, sensorimotor bodily skills that effectively constitute experience the way Kantian concepts mediate intuitions.[39] Perception is relational, not fixed. How a thing looks is different than how it really is. That tree looks just as short as this one because it *is* just as short. However, that tree must *actually* be taller, since we can see that it's farther away. Precise art writers must develop keen sensorimotor knowledge, which is a component of conceptual content. Let's see whether *Tu m'* fares better under the enactive approach, which considers each spectator's particular perceptual gear, and

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doesn't require "pictures in the head" to compensate for each viewer's minimal apparatus. The enactive approach's emphasis on invariance overcomes Peacocke's Paradox, whereby perspectival scale is categorized as a "nonrepresentational feature of experience." One could argue that the enactive approach combines the snapshot conception's active worldly looking with the qualia theory's recognizing that the subjective body frames worldly experience.

Perceiving *Tu m'* in Light of the Enactive Approach

Duchamp painted the notoriously horizontal, ten-foot wide *Tu m'* to inhabit the space directly above the bookcase in his patron Katherine Drier's library, so this painting forces spectators into an enactive relationship from the onset. Never meant to be experienced in the standard way (hung at eye level), people must work extra hard as they gaze upward at the painting, which museums continue to hang on high. Even from a distance, *Tu m'* requires repeated glimpses to take it all in. It cannot be perceived in one pass. While this is true for all works of art, it is especially true for this unusually wide painting, hung out of reach, both physically and conceptually.

Even the immense 19th century tableau paintings hanging in the Louvre, such as those by David, are easier to see than *Tu m'*, provided one gets enough distance. In the absence of a toe hold, such as recognizable imagery, *Tu m'* inclines one to come closer, but it remains up there, out of sight. One eventually carves out a visual field by scanning its surface, taking in whatever one can, as thoroughly as possible. When one does finally get access to *Tu m'* (via photographic reproduction), there is not enough concrete information to grab onto, save a bicycle wheel, a stack of color swatches, ethereal columns of circles, a pierced canvas, and a pointing hand. As the four extra images in the Appendix indicate, photographs freeze distorted experiences, pushing viewers even farther afield. Such efforts to see remind us of our tenuous grasp of the world, a view paralleling ideas underlying the enactive approach, and demonstrate vision's ties to touch.

> When we see, we do not represent the whole scene in consciousness
> all at once. Visual experiences do not present the scene in the way
> that a photograph does. In fact, seeing is much more like touching
> than it is like depicting.[40]

Our access to the visual world depends upon our bodies, how we are environmentally situated, which depends upon how much of the visual field we can process in a given time.

That *Tu m'* remains out of reach makes it the ideal vehicle for exploring perception, in particular, the enactive approach. Absorbing what's out there, in the world requires a great deal of movement. As Noë remarks, "We peer, squint, lean forward, adjust lighting, put on glasses, and we do so automatically."[41] Not unlike our pets, "we draw near to get a better look (or better to handle, sniff, lick or listen to what interests us). The central claim of what [Noë calls] *the enactive approach* is that our ability to perceive not only depends on, but is constituted by, our possession of this sort of *sensorimotor knowledge*." We do not capture the world in one glimpse or continuous frames, like a snapshot or a film. Perceiving the world requires continuous scanning and multiple vantages, a point earlier Cubist paintings hinted at, yet the puzzling bottlebrush suspended from *Tu m'*'s surface makes manifest. There is one sense in which it helps that there is so little familiar material here. It's very difficult to project information onto this canvas, as one does with Daniel Dennett's "filling-in" counter-example, whereby one sees a bit of a wall covered with Marilyn Monroe wallpaper, and then "jumps to the conclusion" that the entire wall is plastered with Marilyn posters. In fact, art historians have been so unlikely to jump to any conclusions here, that most have endorsed Duchamp's claims, rather than find their own way into this work.

Were the events depicted by *Tu m'* to be positioned in real space, Noë would call their aspects P-properties, shorthand for perspectival properties such as apparent shape and size, which are the "*looks* of things, their visual appearances."[42] Actual properties, which require special skills (sensorimotor apparatus) to discern, cannot be inferred from P-properties, but they can be determined using mathematics. Typically considered apparitions, P-properties are just as "real" as actual properties. Ironically, art schools must teach students how to notice, employ, and render P-properties, so that their landscapes appear realistic enough for viewers to read them as spatially sound. While few spectators ever notice such painterly devices, they certainly do when painters forego them. "P-properties are objective in the sense that they are determinate and that they do not depend on sensations or feelings."[43]

P-Properties and the Significance of Invariance

Since the look of an artwork varies as we move, discovering what is invariant requires one to track the movement-dependent changes in P-properties. Noë references James Gibson's example of moving around a table, noticing its trapezoidal perspectival shape, yet concluding that its rectangular shape is invariant. Duchamp's notes regarding "tactile exploration" on the back of a 1914 gas bill demonstrate his awareness of tracking. Differentiating the flat eye from the 3-D eye, in regards to their capabilities or function (cathedrals seen at a distance appear flat while cups in our hands are objects), he notes that seeing flatly entails a "wandering-perception" (related to the sense of distance). A flat eye has only a tactile perception of 3-D perspective. "It must wander from one point to another and measure the distances. It *will not have a view of the whole* like" the 3-D eye sees.[44] This wandering with the eye to formulate three-dimensional space recalls Noë's remarking that the object's height depends on the mathematical relationship between the perceiver's placement in the field and his/her distance to the object.

The enactive approach focuses on the relations between things and their environment. P-properties, which reflect an object's environment, depend on relations between spectators and objects. In terms of art, objects could be parts of a work, say imagery or forms, rather than its totality. Just as photographs of *Tu m'* betray the cameraman's location (the Appendix features images from varying vantages), "P-properties depend upon relations between the perceiver's body and the perceived object (and also on conditions of illumination).[45] P-properties, which cover size and shape, require viewers to discover what is invariant, as compared to colors which are relational between colors, thus necessitating tracking under different lighting conditions. That "colors are not existent-dependent on perceivers (or their sensory systems)," definitely differentiates the enactive approach from the qualia theory.[46] A primer on P-properties, *Tu m'* is the rare painting where figurative imagery, nonobjective patterns, *real* objects, trompe l'oeil shadows and real shadows co-exist. Seeing the parallel circles as columns tilting out or into the canvas is a P-property application. Similarly, discerning real from painted safety-pin shadows requires analyzing that section's P-properties. Noting that the elongated form is actually the shadow of a cork-screw is yet another application.

This paper addresses perception, not interpretation, however, *Tu m'* presents one situation where perception and interpretation are fairly indistinguishable. The received view is that the bicycle wheel, corkscrew and hat rack (the squid-like object on the right) are all shadows. Most art historians consider this self-evident, partly because Duchamp's notes, published as *The Green Box* (1934), mention his plan to use an enlarger to capture details of shadows cast on several of his ready-mades. [47] Of the three shadowy figures, the corkscrew shadow is severely distorted to expose the angle of light cast on the actual object. We thus imagine a very bright, but distant light source and an ordinary corkscrew twisted into the wall, however "off-painting," on the painting's left side. We similarly imagine some prismatic device on its right side, apparently spurring 24 spears of refracted light, though their color patterns do not reflect the light spectrum.

Duchamp aficionados easily recognize three images here that reference earlier works, yet no one, save close friends who visited him at home, would have associated such images with him in 1918.[48] Notice the shadowy image of an *ordinary* bicycle wheel, which every published art historian considers a reference to his infamous *Bicycle Wheel* (1913/1951). Duchamp's describing this painting as an inventory has either fooled them or lulled them into carelessness. It doesn't take much effort to realize that this bicycle wheel is presented without the metal fork that connects *Bicycle Wheel's* bicycle wheel to its supporting stool. This wheel is actually an ordinary bicycle wheel. Experience and perception are belief-independent, yet art historians' prior beliefs regarding *Tu m's* being exemplary of Duchamp's oft-quoted note to bring together painted shadows cast by several readymades has lead them to an *apparition*, preventing them from accurately perceiving its imagery as other than shadows of readymades.

Wittgenstein once remarked that interpretations are not properties of things, a view that is consistent with Noë's notion that P-properties are objective, not judgments.[49] Perceptions, which are no less thoughtful than interpretations, cannot be divorced from the thoughts that engender them, the way new information gives rise to new interpretations. Interpretations engage ideas that are independent of the perceiver, while perceptions reflect acquired sensorimotor skills. To see this ordinary bicycle wheel as *Bicycle Wheel* is an interpretation (one is treating the image as a symbol, not a perceivable object), while recognizing the stretched form as a corkscrew is a perception, which requires both fore-knowledge of

corkscrews and imagination to recognize one from this elongated shape. Similarly, to see the brown slats on the painting's left hand corner as Duchamp's *Trois Stoppages-Étalon* (1913-1914) is an interpretation (it requires extra-aesthetic knowledge), but recognizing that the eight curved segments on the painting's right are derived from two brownish templates on its left entails perception, since one can use tracing paper to establish the relationships between the left-hand and right-hand curves.

It's truly surprising that everyone perceives these images as shadows cast by readymades. The fact that the bicycle wheel shadow was not made using a readymade casts doubt on the reliability of this note's shadow reference. One can see the shift (left to right) from the chiaroscuro—of the bicycle wheel, the hat rack, the stoppages, the cascade of color chips, the trompe l'oeil tear and the glimpse into *the world beyond* (alluded to as inside the tear)—to a totally new form of rendering that introduces optical phenomena. By contrast, *Hat Rack's* status remains an issue of interpretation. Is it a cast shadow or a spirit photo? In 1917 or 1918, Duchamp created a "spirit photograph," an image shot over a period of time, whose exited subject left only a shadowy figure. This photo features *Hat Rack*.[50] Bearing no resemblance to Duchamp's published 1918 photograph of *Hat Rack's* cast shadow, *Tu m*"s hat rack imagery rather resembles either a spirit photo, a cameraless photograph (such as a rayogram), or an x-ray.

Duchamp included a studio shot featuring the legendary *Fountain* (1917), *In Advance of a Broken Arm* (1915), and the alien *Hat Rack* all hanging from the ceiling in his portable museum, known as the *Bôite en Valise* (1935-1941)(Edition 300), which contains miniature replicas of 69 works.[51] Art historians have clearly interpreted, rather than perceived these images as cast shadows. Just as the enactive approach contends that vision's details are present *virtually* (downloaded from the world as details), perceiving *Tu m's* imagery of Duchamp's now classic works (downloaded from the world as art) requires only that one recognize an ordinary bicycle wheel, notice *Hat Rack* from a photograph that was always present, or relate the lower-left hand side's curves to the right-hand side, rather than access knowledge that one never could have had until decades later. There are fewer shadows.

The Enhanced Enactive Method

In response to Peacocke's claim that we need nonconceptual content to "characterize *ways* things are

given in experience as distinct from the mere fact that a property or feature is given," Noë proposes that we *comprehend* the way things are given in sensorimotor terms.[52] While this works well for experiencing the world and making sense of our environment, it overlooks cognition. A child's failure to grasp calculus is not due to his/her lack of sensorimotor skills, but because he/she lacks the entire mathematical foundation necessary to conceptualize mathematics in those terms. A child's viewing calculus' symbols as nonconceptual content differs from adults' inability to interpret James Joyce's *Finnegan's Wake*'s mostly nonconceptual content.

As Noë recognizes, the "representational content of experience (how the experience presents things as being) cannot be thoroughly conceptual, because, bluntly stated, we do not have concepts of all things we can perceive."[53] To imagine that sensorimotor terms can do all the work for the category of nonconceptual content does not give unreportable perceptions a fighting chance to become conceptualized. The nonconceptual and conceptual content are partners in a process, whereby attention to the former eventually stimulates actors to locate conceptual frames. That Noë's enactive approach overrides the nonconceptual content project originated by Evans, Peacocke, and Fred Dretske (unconscious perceptual experience) is a huge problem. His notion that everything we need is already in the world aptly describes the process of perceptual experience, but it minimizes the cognitive process underlying perception. The Enhanced Enactive Method preserves the role for nonconceptual content as a placeholder, per se, for cognition on its way from unidentifiable perceptual experience to conceptual content. As *Tu m'* makes clear, works of art are filled with nonconceptual content awaiting writers whose work makes it appear conceptual after all.

Conclusion

Critics and art historians who practice the enactive approach stand to experience more accurate perceptions than those whose perceptual tools exclusively reflect either of the two competing theories, the qualia theory or the snapshot conception. In the absence of reliable perception, there can be no meaningful interpretation, let alone effective criticism. Proof that the snapshot conception, for which the visible world is represented in full detail, doesn't work rests on the history of misperceptions concerning *Tu m'*, despite the army of art historians who have spent nearly ninety years examining and explaining

this painting's imagery. Clearly, it's not enough to look at this painting, which is difficult indeed to access, given its bizarre scale, hanging height, and unfamiliar imagery. Given the discrepancy between input and vision, the brain cannot perceive all that it experiences, so writers take short cuts, engendering oversights, as the *Tu m'* case makes clear.

Under the qualia theory, visual experiences are reduced to subjective sensational properties, whether conceptual or nonconceptual. With *Tu m'*, everything seems nonconceptual, since there are so few toe holds. I therefore propose the enhanced enactive method, which takes advantage of qualia theory's identifying nonconceptual content. *Tu* m''s distancing mechanisms (literal and metaphorical) force spectators to move around, to assume various perspectives, while repeatedly questioning what is in view, as well as the work's actual color, scale, and size. Neither Noë's enactive approach, which entails bodily movements akin to visual touch, nor my enhanced enactive method, compensate for writers who misstate titles and materials listed on check lists, but they do elucidate why so many critics outright misidentify colors, scale, processes, materials, composition, and subject matter. Perceptual fallibility is built into these models, since one of their primary premises is that we're operating with a minimal apparatus. The snapshot conception fails to doubt its limitations. Mistakes stem from underutilizing strategies, such as searching for invariance, that discern real from apparent features. Noë remarks that one does not misperceive because one misjudges, but that "one misperceives because one draws on the wrong sensorimotor skills and expectations."[54]

Notes

[1]Alva Noë, *Actions in Perception* (Cambridge: MIT Press, 2004), 179. While this book concerns neither art nor criticism, it has useful applications for the artworld, which is wholly perception dependent. Married to artist Miriam Dym, he is no doubt aware of the artworld's perceptual problems. He discusses the activity of making art's relevance to phenomenology on pages 175-9.

[2] I use the term artworld rather loosely here. The artworld includes art lovers who occasionally read handouts, articles, and/or reviews to glean more insight into artists' practices, making them vulnerable to writers' perceptual errors. I know of no study that has tracked critics' descriptive errors (that would be a great art project), yet I come across them routinely in museum handouts and even *New York Times* reviews. Long before vision science described our limited visual apparatus, Ludwig Wittgenstein noted that "We find certain things about seeing puzzling, because we do not find the whole business of seeing puzzling enough." *Philosophical Investigations* (New York: Macmillan Publishing, Inc., 1968), 212e.

[3] A recent study indicates that 169 newspaper art critics consider their *primary* responsibility to be to describe objects or exhibitions for readers who typically read about art they have not seen. *The Visual Art Critic,* ed. by András Szántó (New York: National Arts Journalism Program, Columbia University, 2002).

[4] Wittgenstein, *Ibid.,* 194e-197e.

[5] Gottlob Frege, "Sinn and Bedeutung," *Frege Reader* (Cambridge: MIT Press, 1997), 156.

[6] Noë, 178.

[7] The influence of *Tu m´* on American painting, once it became publicly accessible in 1952, is indisputable. It demonstrates how to produce hybrid spaces that blend flat and deep, while mixing real and illusionary. Had it never emerged from Katherine Dreier's library, it's doubtful that we would have experienced Robert Rauschenberg's combines; Jim Dines' paintings with dangling, protruding objects; Jasper Johns' paintings that mix real and painted things with illusionary and cast shadows; or Richard Tuttle's wire drawings that cast shadows. Painting would have gone another way.

[8] The anthology *Vision and Mind*, ed. Alva Noë and Evan Thompson (Cambridge: MIT Press, 2002) presents numerous examples of comparative perceptual tests. See Figures 11.1, 11.2, 16.1 and 16.2 on pages 233, 235, 429, and 433, respectively.

[9] The original *Bicycle Wheel* (1913), Duchamp's first and best known readymade, was lost. The second version (also lost) was photographed in his New York City studio in 1917, but was never shown, except as a photograph in the *Boîte-en-Valise*. Only its third version created in 1951 for "Climax in 20th Century Art 1913" at Sidney Janis Gallery, was ever exhibited publicly, hence the date 1913/1951. *Trois Stoppages Étalons* (1913-14) was first publicly exhibited at MOMA in 1936 in "Fantastic Art, Dada, and Surrealism." Given Duchamp's extremely frustrated correspondence with its owner Katherine Dreier regarding this work (four letters in a year) and his instructing her not to show it, clearly, she had never opened the box containing this work, so it is doubtful that anyone else would have seen it before 1936. *Affectionately, Marcel*, ed. Francis Naumann and Hector Obalk (Ghent: Ludion Press, 2000), 199, 202-3, 206. Until 1964, when Duchamp authored its replica, *Hat Rack* (1917/1964) was known only from two photos, one of which was included in the portable museum. Based on Duchamp's comment that works he contributed to the Bourgeois Gallery's 1916 exhibition were hung near the umbrella stand, art historian/dealer Francis Naumann conjectures that one must have been *Hat Rack*, but there is absolutely no record of this unlikely event happening in 1916, one year before *Hat Rack's* official 1917 date. *Tu m´* itself was never exhibited publicly until 1952.

[10] In a 1935 letter written to his patron Katherine Dreier, Duchamp reiterates that he used the three wooden slats (Duchamp termed them rulers) as templates to make her painting *Tu m´*. Not only had Dreier already owned this painting for 17 years, but she owned the box containing the rulers, which she strangely left unexplored (Naumann, 2000, 202-203). While art historians acknowledge the relationship between the rulers, which were first used to draw the *Network of Stoppages* (1914), whose branching network designates the placement of the nine malic molds on the *Large Glass* (1915-1923); and the curved lines visible here, none bothers to explain how the rulers engender these curves. Using tracing paper, I discovered that he actually used only *Tu m´*'s top and bottom rulers. The black and red curves on the right get their shape and scale from the curves of these two rulers. The top pairs of curves are twins, presented in different phases, to account for the length of the one pair hidden behind the fixed canvas painted to appear perpendicular to the painting's surface. The bottom pairs of curves are mirror reflections of one other, thus reinforcing the twisting, or flapping motion of the empty canvas' bottom edge.

[11] Duchamp, Marcel, "The Continuum," *The Writings of Marcel Duchamp* (New York: Da Capo Press, Inc., 1973), 96.

[12] "Seeing something as *x*" seems like common sense today, but it was considered a radical view when first proposed by Edmund Husserl's *Cartesian Meditations* (1929 lectures published in 1960) (The Hague: Marinus Nijhoff, 1967), 33-41; Ludwig Wittgenstein's *Philosophical Investigations* (Part II written between 1946 and 1949 and first published in 1953), 1968, 193e-215e; or even Richard Wollheim's *Painting as an Art* (1987).

[13] Noë, 49.

[14] *Ibid.,* 134. (references a study by Kevin O'Regan)

[15] *Ibid.,* 52-53.

[16] *Ibid.,* 39.

[17] Noë and Thompson, "Introduction," p. 9.

[18] *Ibid.,* 9.

[19] Noë, 40.

[20] This notion of repeat art events yielding different experiences was stressed by John Dewey, who realized that the "series of doings in the rhythm of experience give variety and movement; they save the work from monotony and useless repetitions." *Art as Experience* (New York: A Perigree Book, 2005), 58.

[21] Noë, 50. He also credits Minsky 1985, Dennett 1991, O'Regan 1992, and Rensink 2000 for this.

[22] Dorothy M. Emmet, "Alfred North Whitehead," *The Encyclopedia of Philosophy* (New York: Macmillan Publishing Co., 1967), Volume 8, 293.

[23] Noë, 124.

[24] *Ibid* .,94.

[25] *Ibid.,* 133.

[26] See also Peacocke's essay "Sensation and the Content of Experience," Noë and Thompson, pp. 267-287.

[27] José Luis Bermúdez, "Introduction" in *Thought, Reference, and Experience,* ed. José Bermúdez, 32 (Oxford: Clarendon Press, 2005). This book's nine essays were inspired by the philosophical work of Gareth Evans, who died prematurely at the age of 34 in 1980.

[28] Campbell, p. 197.

[29] John Campbell, "Information Processing, Phenomenal Consciousness, and Molyneux's Question" in *Thought, Reference, and Experience*, ed. José Bermúdez, 196 (Oxford: Clarendon Press, 2005).

[30] Noë 85.

[31] *Ibid.,* 82.

[32] Stephen Davies, "Authors' Intentions, Literary Interpretation, and Literary Value" *The British Journal of Aesthetics* 46, no. 3 (2006):223-247 or http://bjaesthetics.oxfordjournals.org/cgi/content/full/46/3/223. Although this essay specifically addresses the philosophy of literature, I see parallels with Arthur Danto's theory of aboutness. In 2005, Danto told me that each artwork has at most two possible interpretations, a stance exemplary of the actual intentionalist position, even though this discussion strictly concerns interpreting literary fictions.

[33] While the notion of an actual intentionalist being overwhelmed by unfamiliar phenomena seems to be a strawman argument, consider Arthur Danto's reviews of both the 2004 and 2002 Whitney Biennials in the *Nation*, for which he mentions works by only four and three artists from lists approaching 100. His point is not that there are only a handful of interesting artists in this year's biennial, but that there are only a few whose intentions he can accurately articulate. While this is an honest actual-intentionalist admission, it demonstrates that they lack the tools to deal with, let alone make sense of material they find unreportable.

[34] Noë, 82.

[35] *Ibid.,* 82.

[36] *Ibid.,* 106.

[37] *Ibid.,* 100. Gareth Evans is among the few (Leibniz being the notable other) to answer positively the question Locke posed to Molyneux concerning a blind person's ability to recognize a sphere, known previously through touch, were his sight to be restored. Since Evans has influenced several prominent qualia theorists, it's odd that they religiously segregate sensorial modalities. Noë addresses this on pages 100-103 of *Action in Perception.* Several writers address this in *Vision and Mind*, which includes Gareth Evans' "Molyneux's Question." "Information Processing, Phenomenal Consciousness, and Molyneux's Question," John Campbell's response to Evans' essay is featured in *Thought, Reference, and Experience.*

[38] *Ibid.,* 73.

[39] *Ibid.,* 11.

[40] *Ibid.,* 72-73.

[41] *Ibid.,* 58.

[42] *Ibid.,* 84.

[43] *Ibid.,* 83.

[44] Duchamp, 1989, p. 88.

[45] Noë*,* 83.

[46] *Ibid.,* 149.

[47] Duchamp, "The Green Box," 1973, p. 33.

[48] See footnote 5.

[49] Wittgenstein, 1968,

[50] Linda Dalrymple Henderson, *Duchamp in Context: Science and Technology in the Large Glass and Related Works* (Princeton: Princeton University Press, 1998), Fig. 118 (no page) and 116.

[51] There is a huge discrepancy. Arturo Schwarz's list of the *Boîte-en-Valise*'s content does not mention this photo. Arturo Schwarz, *Complete Works of Marcel Duchamp* (New York City: Abrams Publications, 1970), 511-512. However, a photograph of the valise's contents in Francis Naumann's recent book clearly depicts its presence. Francis Naumann, *Marcel Duchamp: The Art of Making Art in the Age of Mechanical Reproduction* (Ghent: Ludion Press, 1999), 170.

[52] Noë, 184.

[53] *Ibid.,* 183.

[54]