Revisiting Design as a Hermeneutic Practice: An Investigation of Paul Ricoeur's Critical Hermeneutics

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Introduction

Despite the plethora of methods, processes, and models that have tried to "explain" design since the Design Methods movement in the 1960s,[1] we still see a general lack of studies that investigate *experienced* design practice.[2] Although it could be argued that practice knowledge abounds in the design research discourse, this knowledge is often entangled in other research objectives, is "hidden from view" as predominantly tacit knowledge, or is sometimes developed using the terms of epistemologies that do not reflect design practice—not least, positivist-inspired ones.[3] Even representations in the practice-oriented, design-thinking literature are problematic, in that they typically are dichotomous, establishing design as something fundamentally "different,"[4]—for example, when comparing designing with engineering, managing, or scientific inquiry. Although such representations hold relevant insights, the risk is that the *experience of designing* is abstracted away and lost in translation. In addition, as long as these representations lack a solid foundation that resonates with practice, they potentially risk supporting metaphors that also do not reflect design practice (e.g., the pervasive metaphor of problem solving), and thus continue to overshadow other perspectives and possible metaphors for designing.[5]

Coyne and Snodgrass suggest that the "hermeneutic circle" is a better metaphor for designing than the dominant metaphor of problem solving because it doesn't "…destroy the complexity, subtlety, and uniqueness of the design situation; or privilege or preclude aspects of the process, but rather respects their interdependence and interaction."[6] The hermeneutic circle is also a metaphor that resonates with Donald Schön's concept of the "reflective practitioner," and as Snodgrass and Coyne note: "Even a cursory examination of the protocol studies of Donald Schön indicates that the design process he describes works according to the dynamics of the hermeneutic circle, proceeding by way of a dialogic exchange with the design situation."[7] The concept and metaphor of the reflective practitioner indeed goes a long way to describe design as contingent, situation oriented, and reflective; that said,

1 Nigel Cross, "Forty Years of Design Research," *Design Studies* 28 (2007): 1-4.

2 See, for example, Erik Stolterman, "The Nature of Design Practice and Implications for Interaction Design Research," *International Journal of Design* 2 (2008): 55-65, and Lucy Kimbell, "Rethinking Design Thinking: Part 1," *Design and Culture* 3, no. 3 (2011): 285-306.

3 See, for example, Klaus Krippendorff, *The Semantic Turn: A New Foundation for Design* (Boca Raton, FL: CRC Press, 2006), and Richard Buchanan, "Wicked Problems in Design Thinking," *Design Issues* 8, no. 6 (1992): 2.

4 See, for example, Roger L. Martin, *The Design of Business* (Toronto: Rotman School of Management, 2004), and Tim Brown, *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation* (New York: Harper Business, 2009).

5 This article relates to an ongoing experimental project where designers share their experience of design practice to "non-designerly" firms, the aim of which is to strengthen innovativeness in these firms. The study is also a contribution to the budding stream of "design-driven innovation." See, for example, Roberto Verganti, "Design, Meanings, and Radical Innovation: A Metamodel and a Research Agenda," *The Journal of Product Innovation Management* 25 (2008): 436-56.

6 Adrian Snodgrass and Richard Coyne, "Models, Metaphors, and the Hermeneutics of Designing," *Design Issues* 9, no.1 (1992): 72.

7 Adrian Snodgrass and Richard Coyne, "Is Designing Hermeneutical?" *Architectural Theory Review* 2, no.1 (1997): 87.

"philosophical hermeneutics"[8] likely offers an alternative or complementary understanding that further deepens our understanding of Schön's seminal contribution.

In this article, I build on the work of Coyne and Snodgrass, who to my knowledge have done the most to advance a hermeneutical understanding of design practice.[9] I first revisit Schön's theory of reflection-in-action and suggest three areas in need of further investigation, where philosophical hermeneutics can provide guidance. I then introduce Hans Georg Gadamer's "historical hermeneutics"—the foundation for Coyne and Snodgrass's work—which at first seems to address these areas. However, after highlighting two gaps that Gadamer's historical hermeneutics leaves in relation to design practice, I direct attention to Ricouer's "critical hermeneutics" and "hermeneutic spiral" that seems to provide an even better metaphor for designing. In the discussion section, I relate these themes to established design theory to show examples of how Ricouer's critical hermeneutics provides a foundation for understanding designing that resonates with and enhances established design theory. Finally, I reflect on and sum up the contribution to design theory made in the article.

Departing from Schön: An Analysis of the "Reflective Practitioner"

When Donald Schön introduced the now well-known concept of the "reflective practitioner" in 1983, he offered a clear departure from the dominant problem-solving paradigm in research on professional knowledge.[10] To Schön, "The situations of practice are not problems to be solved but problematic situations to engage in, characterized by uncertainty, disorder, and indeterminacy."[11] Schön argued that practitioners deal with such situations through "reflection-in-action." In Schön's well-known illustration of this process, architect and tutor "Quist" shows first-year architect student "Petra" how, "by doing," to fit an elementary school building to a specific site characterized by a "screwy slope." In "… a reflective conversation with the situation,"[12] Quist applies possible "disciplines" (e.g., a specific geometry) to try to order the ambiguous situation. Throughout the reflective process, Quist listens to how the situation "talks back"—what the possible consequences of this or that move might be. Thus, he continuously "reframes" the situation in different ways, showing Petra how, by reflecting and sketching in tandem, she could get out of the problematic situation she was in. However, as enlightening as the case is, at least three areas are in need of further investigation.

First, the theory of reflection-in-action still seems for the most part to presuppose a *negative* something—a problematic situation. However, many design situations are more open and less negatively connoted than the concept and terminology of

8 I use the term "philosophical hermeneutics" to indicate that I mean more contemporary hermeneutics developed by, for example, Hans Georg Gadamer and Paul Ricoeur, rather than the older, biblically oriented hermeneutics.

9 See also Terry Winograd and Fernando Flores, *Understanding Computers and Cognition: A New Foundation for Design* (Indianapolis: Addison-Wesley, 1987).

10 Donald A. Schön, *The Reflective Practitioner: How Professionals Think in Action* (London: Basic Books Inc, 1983), 43.

11 Ibid., 15.

12 Ibid., 43.

"problem" can capture.[13] Designers often direct their interest toward situations and phenomena that may be inspirational and may spur new understanding without being problematic and in need of a "solution." Second, the subject-object duality remains intact. Reflective practitioners reflect *on* something by immersing themselves in reflection, but the subject is still positioned in a traditional distanced role in relation to the object. Neither does Schön discuss the relationship between the situation and the "world." The situation is equally intact and restricted, certainly complex, but nevertheless "inert." Third, the notion of reflection seems to be restricted to a more or less inert self. Schön discusses how Quist draws on his "repertoire," but he does not delve into where this resource comes from or how it is related to practice. What happens with the self in the act of reflecting on, or preferably *with*, something?

These three areas of how to understand the design situation, subject/object duality, and engagement or transformation of the self are in one way or the other directly related to meaning. Schön certainly discusses meaning, but in the protocol studies of this first-year tutorial case in architecture, more practical and tangible difficulties seem to take precedence, and as Molander notes, "… there is a lingering trace of objectivism in the sense that he [Schön] speaks as though there is still a fundamental world of facts."[14]

Enter Hermeneutics: Hans-Georg Gadamer's Historical Hermeneutics and Hermeneutic Circle

Hermeneutics can be considered a European cousin to the American Pragmatist tradition in Philosophy, where Schön had his roots. Both offer a "relativist" or "constructivist" understanding of knowledge, culture, practices, social interactions, and so on—a clear contrast to the dominant "objectivist" tradition in science on both continents. The linguistic term "hermeneutic" goes back to ancient Greek mythology and to *Hermes*, the messenger between the Gods and the mortal humans who had to be able both to understand the original message from the Gods and to translate it so that intended meaning would be understood by humans.[15] Hermeneutic interpretation builds on a long history of Biblical exegesis—the process of extracting meaning from and interpreting Biblical texts, which began to develop in ancient times when the Greek and Hebrew texts were first written.[16]

More contemporary hermeneutics began to develop in the eighteenth century by German philosopher and theologian Friedrich Schleiermacher. Inspired by the land winnings in positivist science his claim was that objective knowledge about the meaning of historical texts could be reached through the use of method. Gadamer's "historical hermeneutics" provides a clear departure from such ambitions and in his *magnum opus*, *Truth*

13 Interestingly, the everyday use of the word "problem" began around 1920 (*Webster's Ninth New Collegial Dictionary,* 1985), and the metaphor of problem solving has since then become one of the most influential metaphors of our time. (George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: The University of Chicago Press, 1980).

14 Bengt Molander, *Kunskap i handling [Knowledge in action]* (Göteborg: Daidalos, 1996), 158. The title and quote are my translations.

15 Bengt Kristensson Uggla, *Kommunikation på bristningsgränsen: en studie i Paul Ricoeurs projekt [Communication at Breaking Point: A Study of Paul Ricoeur's Project* (my translation)] (Stockholm: Brutus Östlings Bokförlag Symposion, 1994), 175.

16 Tzvetan Todorov, *Symbolism and Interpretation* (Ithaca, NY: Cornell University Press, 1982), 111.

and Method,[17] Gadamer argues that such notions of knowledge are impossible because both the subject and the object are already *situated* in history; alas, there is no objective position. This view was inspired by German philosopher Martin Heidegger's ontological philosophy and the concept of "Dasein"—of being in the world, and of "thrownness" (Geworfenheit); to be in the world is necessarily to have to interpret and seek to understand (as a verb). Truth is then found not in any original meaning of a text or work, but in its application. Here, Gadamer was inspired by Aristotle's concept of Phronesis, and a striking similarity emerges to the way truth is understood also in the American Pragmatist tradition.

To reach such situated truth one has to be *immersed* in interpretation. Just as leaving the game means to lose touch with the "play experience," so the "Ehrfahrung" (experience) that is fundamental to understanding is lost if one is distanced from that which is to be interpreted. For this reason, Gadamer rejected attempts to build hermeneutics on the strict use of method. To Gadamer, attempts at distanced objectivity through method mean that "Zugehörigheit" (belonging) is lost and therefore also any possibility to reach any relevant understanding.[18]

Further, to Gadamer the practice of interpretation is truly dialectical one; it is a process characterized by active questioning and answering: the "… art of entering into dialogue with the text."[19] It is a dialogue that moves in a circular pattern centrifugally toward understanding. In this "hermeneutic circle," the movement starts from our own prejudices (which is part of our own "horizon of understanding"); in encountering the "other" in the interpretive process, ideally our own horizon of understanding evolves and may fuse with the horizon of the other who is to be understood—Gadamer's central notion of the "fusing of horizons."

Gadamer ties these notions of situated truth, meaning, and understanding with the idea that tradition and historical texts represent the accumulated "being in the world" of others before us. This fundamental principle Gadamer calls "Wirkungsgeschichte," which can be translated "history of effect" or "effective history." A consequence of these principles is that we are always downstream of effective history and thus have access to the means necessary for true interpretation. In a move that strengthens his opposition to scientific objectivity, Gadamer thus considers prejudice, by which he means pre-understanding, as not only unavoidable but also fundamental to understanding. In other words, he "gives nuance" to the essentially negative understanding of prejudice in relation to the objectivist tradition.

However, Gadamer's strong emphasis on reconfiguring interpretation of history and tradition to deemphasize distancing poses a problem when we apply his approach to better understand a more future-oriented design practice that

17 Hans Georg Gadamer, Truth and Method (London: Sheed & Ward, 1996).

18 Ibid., 104.

19 Ibid., 368.

contributes to the on-going creation of new meaning in culture. When Gadamer emphasizes "situatedness," he fails to explain how *new* meaning might arise. This gap in Gadamer's historical hermeneutics in relation to design practice is important to investigate further. The second gap I investigate is how Gadamer's focus on interpretation of existing works fails to give a rich understanding of how works emerge in the first place. In design, the emerging work and the design practice behind it are of greater interest.

From Hermeneutic Circle to Hermeneutic Spiral: Paul Ricoeur's Critical Hermeneutics

One way out of the deadlock of tradition and authority is to be found in French philosopher Paul Ricoeurs' critical hermeneutics. His philosophy builds on Gadamer's historical hermeneutics, but it also departs from it in several respects. Most important, it introduces a critical distancing dimension to interpretation that Gadamer could not allow in his opposition to the method oriented approach. It also enhances "poetic redescription" to achieve new meaning, something on which Gadamer did not elaborate.

To understand how Ricoeur can introduce a "critical instance at the heart of interpretation,"[20] we start by seeing that Ricoeur has a different relationship to ontology than Heidegger and Gadamer. While Ricoeur acknowledges interpretation and the notion of Dasein, he rejects Heidegger's universalist ambition to let ontology determine everything. Instead, he follows German Idealist philosopher Karl Jaspers in thinking about merely "ontological indications"[21]—a response to the risk that ambitions toward complete ontological understanding may shut down further communication. Typical of Jasper's and Ricoeur's philosophies is that they instead accord primacy to ongoing and open communication. With this Jaspers-inspired position, Ricoeur re-introduces epistemology into hermeneutics and establishes a "long detour"[22] to understanding in which that both are involved: an ontologically derived interpretation and an epistemologically derived reflection (which might even be distanced and critical). These two are intertwined in a "hermeneutic spiral" that opens up to the "excess of meaning" of the world, rather than locking meaning to established history and tradition. This more postmodern understanding of discourse can be seen as a positive, ongoing encounter of diverse interpretations—a "loving struggle"[23] in which care has to be taken to actually keep tensions and frictions in place because they are fundamental to the process of understanding.

To achieve this integration of a critical faculty in the dialectic of hermeneutics, Ricoeur found inspiration in critical theorist and sociologist Jürgen Habermas's critique of Gadamer's historical hermeneutics.[24] Habermas challenged Gadamer's historical hermeneutics to reveal alternative understandings which are obscured

20 Bengt Kristensson Uggla, *Slaget om verkligheten [The Battle of Reality* (my translation)] (Stockholm: Brutus Östlings Bokförlag Symposion, 2002), 339.

21 Kristensson Uggla, *Kommunikation på bristningsgränsen*, 238.

22 Ibid.

23 Bengt Kristensson Uggla, *Ricoeur, Hermeneutics and Globalization* (New York: Continuum, 2010), 28.

24 Paul Ricoeur, *From Text to Action: Essays in Hermeneutics II* (Evanston: Northwestern University Press, 1991), 270.

by dominant ideology. To Habermas, oppression occurs in the "sphere" of communicative action where language is distorted on the basis of the terms established by the dominant power—for example, through tradition and history writing. Hermeneutics cannot detect this distortion if it cannot develop an *explanatory* critical perspective, Habermas argued. This understanding supports Ricoeur's assertion that critique is fundamental to the goals of keeping communication open and of enhancing the tension needed to generate new meaning. Ricoeur thus proposes a fusion between the critical attitude of Habermas's focus on *explaining* and the interpretative approach of Gadamer's aim for *understanding*. To achieve this move, Ricoeur has to rearrange the understanding of hermeneutics in four interrelated ways.

First, "distancing" can be seen as a prerequisite for interpretation rather than as it's opposite. Indeed, the fixation of the text is a kind of distancing from the "original" meaning already there—"… the world of the text may explode the world of its author"[25]—making an infinite number of readings or interpretations possible in new socio-cultural contexts. In other words, distancing was in a sense already there in Gadamer's hermeneutics. Second, to overcome the devastating dichotomy between explaining and understanding, hermeneutics has to move its discourse from the work back to the practice—from the text to the act of writing (or, for example, from the designed object to designing). Third, when departing from practice instead of from text or work, it is vital to emphasize "poetic redescription" within the process of hermeneutics. To illustrate, the use of metaphorical deliberation enhances the potential to open up the meaning of the text (or artifact) in relation to what is external to it—to let the text open a "world" (or many) "in front" of it.[26] Fourth, the subject needs to be rearranged. As Ricoeur articulates it, "To understand is not to project oneself into the text but to expose oneself to it; it is to receive a self-enlarged by the appropriation of the proposed worlds that interpretation unfolds."[27] To receive thus becomes the dialectic counterpart to distancing; to receive also means to surrender the notion of an inert self.

Gadamer saw thrownness as an essential to the practice of interpretation; we might also relate the concept of thrownness to the *result* of the practice, as Ricoeur proposes. The design, or the poem, or the "other" is also something that is "thrown into the world" as a proposal to be interpreted, and thus it holds the capacity to open up new worlds. If we then combine the poetic reference and the ability to rewrite reality with a critical perspective, we gain a subversive "… mode of the possible, or better, of the power-to-be …;" "… therein resides the subversive force of the imaginary."[28] This perspective resonates with design practice as understood by, for example, design theorist Håkan Edeholt,

25 Ibid., 298.
26 Ibid., 300.
27 Ibid., 301.
28 Ibid., 300.

who suggests that the innovation potential in design is to propose how things "might be."[29] For understanding design practice, Ricoeur's critical hermeneutics and his metaphor of the hermeneutic spiral thus provides an even richer metaphor and concept than Gadamer's historical hermeneutics and circle. Taken together, the four ways in which Ricoeur rearranged the understanding of hermeneutics correspond precisely with the two gaps found in Gadamer's historical hermeneutics.[30] While Gadamer's circle and fusion of horizons suggest an inwardly centering and potentially conserving dialectic also found in the metaphor of reflection,[31] Ricoeur's spiral integrates both a centering movement of reflection and a decentering movement of communication with others via manifested and poetically rich interpretations: for example, designed objects that are open to yet new interpretations in ever new iterations.

Ricoeur's Critical Hermeneutics in Relation to Established Design Theory

Adopting the metaphor of reflection and considering "problem setting" rather than problem solving, as Schön did, is to take a giant leap toward explicitly discussing meaning. Here, Coyne and Snodgrass's Gadamer-inspired understanding of the "reflective conversation" further deepens Schön's contribution. However, as the previous sections show, Gadamer's interest was first and foremost in how relevant interpretations are made of existing texts—not in the practice of creating new meaning. This mismatch with design practice, which is engaged in active interpretation of situations to manifest new meaning in designed objects (and services), revealed two missing and intertwined dimensions of design work: critique and poetic redescription. Ricoeur explicitly introduces these dimensions to hermeneutics with the notion of the hermeneutic spiral. If we now take a look at design theory from this new vantage point, what does it say about some common themes?

First, from a hermeneutic perspective, the notion of the problem is fundamentally challenged. As Coyne has argued, a more postmodern understanding grants that even the "tame" problem is wicked.[32] In other words, design situations are more or less inherently "open." The social dimension of open projects means that the designer has to deal with complex "assemblages" of more or less articulated meanings, material artifacts, embodied experiences, and more.[33] These assemblages could be seen as an expansion of Schön's "design domains," which "… contain the names of elements, features, relations, and actions and of norms used to elevate problems, consequences, and implications."[34] Further, these collections are often paradoxical and may have the quality of a dilemma or mystery and be characterized by their "excess of meaning," to use Ricoeur's terminology. As a result, even the concept of the "wicked

29 Håkan Edeholt, *Design, innovation och andra paradoxer: Om förändring satt i system [Design, innovation and other paradoxes: About systematic change* (my translation)] (Göteborg: Chalmers University of Technology, 2004).

30 I identified these gaps when I applied Gadamer's historical hermeneutics to three empirical design cases, also mentioned in note 46.

31 See, for example, Donna Haraway, *Modest-Witness@Second-Millenium* (New York: Routledge, 1997).

32 Richard Coyne, "Wicked Problems Revisited," *Design Studies* 26 (2005): 5-17.

33 See, for example, Nigel Cross, *Designerly Ways of Knowing* (London: Springer Verlag, 2006), who acknowledges that "… designers are immersed in material culture," or Verganti, *Design, Meanings and Radical Innovation*, 2008, who argues that designers as interpreters engage in the "design discourse," which includes socio-cultural perspectives on design.

34 Schön, *The Reflective Practitioner*, 96.

problem"[35] seems insufficient. It neglects the fact that what is deliberated in design is often not so much a problem, but rather is a typical human situation where inspiration can be found in almost anything that is intriguing. This understanding also expands Schön's discussion of problem setting and problem solving to more explicitly enhance meaning.

Second, to accept this meaning-oriented understanding of design situations implies that the interpreter is inevitably situated in such complex assemblages of meanings.[36] To understand design practice in these situations, Claude Lévi-Strauss's notion of "bricolage" might be useful.[37] Lévi-Strauss devised the bricolage metaphor to describe how myth-making and the generation of knowledge in pre-scientific cultures seems to be a bricolage (i.e., collage) of an already existing and more or less coherent or ruined heritage. In other words, situatedness is in no way an obstacle to finding *new* meaning; in fact, quite the opposite—it is a prerequisite. In addition, as Derrida proposed in a response to Levi-Strauss's notion of the Engineer as a symbol of the modern civilized ideal, even the notion of the Engineer is a myth generated by the Bricoleur. Or in other words, not even "scientific" cultures are as rational as they may seem.[38] The metaphor of bricolage thus resonates with Gadamer's argument that being situated in the "history of effect" cannot be avoided. It also resonates with his idea that prejudice and fore-meaning cannot be avoided in interpretation. Prejudice is tied to and operative in everyone's own horizon of understanding, and it has to be constructively engaged in interpretation as a willingness to expand our own understanding and to be open to the possibility of the "fusing of horizons"—to the understanding of something else or of the other. Schön's Quist and Petra case did not really discuss this dynamic and the matter of prejudice, although his notion of "repertoire of domains"[39] seems to be similar to pre-understanding (but more objectively oriented). Such aspects have also been discussed, for example, by Darke as "primary generators"[40] and by Buchanan as "placements."[41] These scholars frame primary generators and placements as preference-oriented design tools—approaches made both inevitable and necessary by a hermeneutic perspective.

Third, to accept the involvement of the self in interpretation means also to acknowledge that the self evolves in these processes—so that a "richer self may be received," in Ricoeur's words. In this perspective, designing is as much a process of learning as of generating a design outcome. The designed object can even be seen as a secondary manifestation of this process of learning, if we for a short while bracket our understanding of design as being about the resulting object (or service, etc.). This perspective also reflects Gadamer's thought of *Bildung* as important—not so much as something that you have to better understand, but rather

35 Horst W. J. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Planning* 4 (Amsterdam: Elsevier Scientific Publishing Company, 1973): 155-69.

36 This understanding also corresponds with Krippendorff's understanding of design as "making sense of things" (Klaus Krippendorff, "On the Essential Contexts of Artifacts, or on the Proposition that 'Design is Making Sense (of Things),'" *Design Issues* 5 (1989): 9-39.

37 Claude Lévi-Strauss, *The Savage Mind* (Chicago: The University of Chicago Press, 1966). See also Louridas Panagiotis, "Design as Bricolage: Anthropology Meets Design Thinking," *Design Studies* 20, no. 6 (October 1999): 517-35.

38 Jaques Derrida, *Writing and Difference* (Oxon: Routledge, 1978), 360.

39 Schön, *The Reflective Practitioner*, 98.

40 Bryan Lawson, *How Designers Think: The Design Process Demystified* (Oxford, UK: Architectural Press, 2006), 46.

41 Richard Buchanan, Wicked Problems in Design Thinking," *Design Issues* 8, No. 2 (Spring 1992): 5-21.

as something that that you *live: Bildung* as a process that makes understanding possible, as a process of being shaped or of *becoming* (as the German word connotes).

Fourth, all interpretation calls for an emphasis on the question, according to Gadamer: "A question places what is questioned in a particular perspective. When a question arises, it breaks open the being of the object…"[42] Questions here are those that emerge from "wondering"—from an honest wish to *understand* in a phenomenological sense.[43] When Gadamer discussed questions, he saw them as parts of a process of intimacy with the work, where "Zugehörigheit" (belonging) must not be lost. Quist's sketchings in teaching Petra may be seen as just such an intimate situation. However, neither Schön nor Gadamer explicitly discussed the necessity of also maintaining a critical position through distancing. Schön did indeed suggest that "reflection-on-action"[44] was important, but more from the point of improving practice than to understand the engaged situation. He also showed how framing and reframing is fundamental to the "conversation with the situation," but this iterative process in my mind does not capture the full tension experienced in a critical dialectic and how it can help provoke and establish new understandings and meanings. In the empirical cases that have inspired my Ricoeur-influenced perspective,[45] it was clear that critical and distanced questioning was essential, and as Johansson and Svengren Holm have shown through empirical research on the work of industrial designers, a critical perspective seems fundamental to any design practice that wishes to propose solutions "outside the box;"[46] and where from a hermeneutical perspective, "the box" is efficiently shut by a problem-solving perspective that does not acknowledge a meaning perspective. In other words, the tension between the phenomenological question and the critical *questioning* that resonates with Ricoeur's notion of a critical dialectic "at the heart of hermeneutics"[47] also seems relevant to design practice.

Fifth, although many design scholars have noted that metaphors can help to generate new ideas and to solve problems,[48] Ricoeur's notion of metaphor directs its attention to *understanding* rather than to problem solving and idea generation.[49] To Ricoeur, metaphors are at the root of how we understand the world, beyond "seeing-as," Lakoff and Johnson hold a similar view of "experiential metaphors" as deeply connected with experienced practice and embodied behavior.[50] In other words, while metaphors can help us see things in a new light and solve problems, as in Schön's notion of the "generative metaphor,"[51] they also are active in establishing *new* meaning that may be (partially) solidified in objects. Metaphorical deliberation might thus be seen as an ongoing process of open communication and poetic creation of

42 Gadamer, *Truth and Method*, 362.

43 See, for example, Max Van Manen, "Practicing Phenomenological Writing," *Phenomenology + Pedagogy* 2, no. 1 (1984): 36-69.

44 Schön, *The Reflective Practitioner*, 61.

45 For details, see Marcus Jahnke and Lena Hansson, "Innovation of Meaning Through Design – An Analysis of a Gender Bending Design Process," *Design Research Journal* 2, no. 10 (2010): 26-33.

46 Ulla Johansson and Lisbeth Svengren Holm, *Möten kring design: Om relationer mellan design, teknik och marknadsföring [Meetings of Design: On relations between design, technology and marketing (my translation)]* (Lund: Studentlitteratur, 2008), 41.

47 See note 15.

48 See, for example, Krippendorff, *The Semantic Turn*; Lawson, *How Designers Think*; and Tom Kelley, *The Art of Innovation* (New York: Doubleday, 2004).

49 Paul Ricoeur, *The Rule of Metaphor: The Creation of Meaning in Language* (London: Routledge, 1977).

50 Lakoff and Johnson, *Metaphors We Live By*, 154.

51 Donald A. Schön, "Generative Metaphor: A Perspective on Problem-Setting in Social Policy," in *Metaphor and Thought*, ed. Andrew Ortony (Cambridge, UK: Cambridge University Press, 1993), 137-63.

new meaning so that some objects—even in design (and often in art)—may be inherently metaphorical in nature and open up to yet new interpretations.

Sixth, although I started out by questioning the problem-solving metaphor for understanding design, the question of whether a focus on meaning might obscure problem solving in design bears asking. In the empirical projects that have inspired my interest in the philosophy of Ricoeur, practical problem solving has abounded, even though the resulting conceptual artifacts were oriented more toward asking questions and providing new and unexpected experiences. The point is that all the problem solving occurred *within* a process of seeking an evolving meaning. Interestingly, this experience corresponds with research in science and technology studies indicating that science and technology development is not as rational as it may seem.[52] Imagination, metaphor, experiences, and other "irrational" thinking are necessary to coming up with new scientific concepts and innovations. What emerges is not an eradication of objectivity and problem solving, but a reversal of the relationship between problem solving and interpretation, particularly when wicked or ill-structured situations are concerned. Considering the strong position of the rational problem solving school of thought in industry and society, the risk that a focus on meaning would replace rational problem solving is minimal. However, a hermeneutic perspective might help lift the veil to reveal the fact that even the sudden idea that may solve a problem comes out of a process of interpretation and deliberation of meaning.

"The real nature of the sudden idea is perhaps less that a solution occurs to us like an answer to a riddle than that a question occurs to us that breaks through into the open and thereby makes an answer possible. Every sudden idea has the structure of a question."[53]

Conclusion

This article contributes to Coyne and Snodgrass's notion that design can be understood as a hermeneutical practice and that the metaphor of the hermeneutic circle reveals things that the dominant problem-solving metaphor seems to cloud—especially aspects that correspond to the lived experience of designing. In the process I have highlighted three areas in Schön's theory of reflection-in-action that needed further exploration. Here, Hans-Georg Gadamer's historical hermeneutics helps to deepen the understanding of the "conversation with the situation." However, this lens falls short of describing both critical distancing and the poetic re-description through metaphorical deliberation that is necessary for the ability to manifest new meaning in design practice. Ricoeur's critical hermeneutics and communicative philosophy achieve an even better fit by articulating the practice rather than

52 See, for example, Mary B. Hesse, *Revolutions & Reconstructions in the Philosophy of Science* (Brighton: The Harvester Press, 1980), and Bruno Latour, *We Have Never Been Modern* (Cambridge, MA: Harvard University Press, 1993).

53 Gadamer, *Truth and Method*, 366.

the work, and by using the metaphor of the hermeneutic spiral, which keeps the tension alive between critique and interpretation, distance and closeness, epistemology and ontology, so that interpretation opens the work to the world via the notion of poetic practice.

The contributions by Schön, Gadamer, and Ricoeur should not be seen as conflicting—in fact, quite the opposite. Taken together, they make a strong case for understanding design as a practice where new meaning, as well as new ingenious practical solutions, can emerge through a process of interpretation, and where more "rational" problem solving is inscribed within rather than define the process as such.

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