Ryo Morimoto Shaking grounds, unearthing palimpsests: Semiotic anthropology of disaster*

Abstract: This article will engage with the current disasters in Japan from the perspective of semiotic anthropology. Disaster seems to produce two moments of the sign: signa naturalia and signa data. The translation of the sign mirrors the architectonic of the signified of disaster, which is mediated by a token-level instantiation of signifiers that initially appears either absent or in excess. The conceptualization of disaster as a zero sign, that is, unlimited possibility, allows an investigation of "a struggle of interpretants" in stipulating the interpretative grounds of the signified amid regenerative processes of social regularity. It is this very exact moment of translation that the sustained continuity reveals its culturespecific "deep social grammar." Disaster or "shaking grounds" has the presenting effect of cultural palimpsests. These unearthed palimpsests enable a heightened metasemiotic awareness of institutional and ideological regimentations, on the one hand, and token-level recontexualizations, assimilations, and hybridizations of the depository of signs in society in the post-disaster contexts, on the other. The article concludes with an attempt to synthesize Peircean semeiotics and Saussurean semiology by assessing the two distinct modes of semiosis, culture and trauma, upon a sudden threat of the experience of discontinuity.

Keywords: disaster; semiotic anthropology; cultural palimpsests; trauma; memory; Japan

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... in order to pin down reality as reality, we need another reality to relativize the first. Yet that other reality requires a third reality to serve as its grounding. An endless chain is created within our consciousness, and it is the very maintenance of this chain that produces the sensation that we are actually here, that we ourselves exist.

- Haruki Murakami (2000 [1998]: 201)

1 Introduction

This article will engage with disaster from the perspective of semiotic anthropology. The recent disasters in Japan have vociferously proved the propensity of disaster in incurring global attention; disaster means "something" to us. In the midst of the recent ground-shaking catastrophes, Chang's outcry for the necessity of semiotic confrontation with disaster is more than relevant: "Given Umberto Eco's observation that 'Any natural event can be a sign' (1984: 15), why hasn't there been a semiotics of disaster?" (2005: 3). Similarly, contemplating the sheer difficulty of what "the experience of" sudden change could imply to semiosis proper, Parmentier asks, "is sudden change... on a continuum with change?" (2006: 1). Parmentier elaborates by touching on the Saussurean dichotomy by further pondering, "is it always possible to distinguish a 'change in the system' from a 'change of system'?" Disaster and the traumatic disjuncture of experience it produces are catastrophic to the warp and woof of Peircean semiotics and Saussurean semiology as they pose a grave challenge to the principle of "synechism" (CP 7.565) as well as the unity of the dichotomous system of signs. In this article I will make an attempt to answer Chang's call and Parmentier's riddle, while reevaluating the anthropological applications of semiotics – "the doctrine of signs" – whose business is to consider the nature and the usage of signs as John Locke fortuitously set the wheel in motion (2004 [1689]: 619–620).

2 Semiotic definition of disaster: Two moments of the sign

As Chang correctly posits, the first task of a semiotics of disaster is to define what disaster is (2005: 5). The magnitude of a disaster is often beyond our understanding as it "impoverishes all experience . . ." (Blanchot 1995: 51). Disasters such as earthquake and tsunami are often characterized as natural, or *signa naturalia*, that is, a sign whose occurrence is outside of human intention (Augustine *De Doctrina Christiana*, II, 1, 2). Just like smoke indexing fire, the unknown *elentchy* a natural disaster inheres as an object of representation is much akin to what the Stoics would designate as a temporary non-evident sign or *hypomnestikon*

(suggestive sign). Its temporal unfolding of physical and psychological consequences reveals to us *a posteriori* the realness of sublime power (only if disaster capitulates our recognition). Thus disaster appears on the one hand as a mere possibility, the extraordinary quality of which absents any form of representation; on the other hand, once its indexical evidence recedes back into our awareness, that is, when disaster and its consequences are interpreted as spatiotemporally linked, it generates an "excess of signs" (Parmentier 2006: 1). Sudden change in the system of signs precipitated by either an absence or an excess of signs disorients the syntagmatic structure of memory (cf. Leys 2000: 2) where a particular set of memories repeats itself without an asymmetrical structure to index its closure. In other words, in sudden change, there is a certain degree of discontinuity and/or trauma between the concept of disaster and the plethora of signifiers it produces in tandem; the disjuncture between the content and its expressions renders the sign phenomenologically insignificant, or from a semiotic perspective, phaneroscopically obscure. Blanchot's account is informative: "It is not thought that the disaster causes to disappear, but rather questions and problems - affirmation and negation, silence and speech, sign and insignia - from thought" (1995: 52).

Peirce deals with the two distinct (possibly discontinuous) moments of the sign by giving it a pragmatic delimitation: "A sign does not function as a sign unless it be understood as a sign" (MS 599: 32). From the perspective of risk assessment, Pelling illuminates the semioticity of disaster: "natural disaster" is "shorthand for humanitarian disaster with a natural trigger" (2003: 4). Disaster, when it is consciously experienced, is always already a mediated phenomenon. It is made relevant to us, while never determining its own compulsion other than suggesting that it *must* mean something since it affects us in some way. In consciously confronting disaster, we make a rigorous effort to re-member it by narrating, re-elaborating, and making claims of the memory and the facticity of the past. The past thus becomes "never out of time and never morally or pragmatically neutral" (Lambek 1996: 240); the plausible account of what happened is always re-presented in the sense of the Boasian secondary elaboration.

Nevertheless, disaster's pure excess renders any effort to represent disaster ostensibly impossible. Friedlander expresses the futility of representing the Holocaust accordingly: "For almost fifty years now, despite so much additional factual knowledge, we have faced surplus meaning or blankness with little interpretive or representational advance" (1993: 130). Disaster thus *presents* itself as a zero sign (i.e., unlimited possibility [cf. *CP* 2.217]) whose semioticity is *interpreted* by the very act of translation of the *representation* of the actual occurrence of sudden change to the memory of "the experience of" it. Disaster neither annihilates signs in society nor obliterates preexisting flow of interpretants, but shakes their

semiotic grounds whereby making translation between *signa naturalia* and *signa data* indeterminate. Consequentially, disaster produces "a struggle of interpretants" (Parmentier 1997: 8), that is, a struggle to represent *ex post facto* the very experience that was "not known in the first instance" (Caruth 1996: 4) or "described" (Blanchot 1995: 6).

3 A struggle of interpretants: The semiotic regimentation

After the magnitude 9.0 earthquake struck just off the coast of Miyagi prefecture and produced a devastating 30-foot tsunami, there emerged several different accounts of the event. Scientific explanations overflowed instantaneously, attempting to fixate the ground of interpretation to the causal mechanism of seismic activities. Some interpreted it as a symbolic act of some divine intervention; the governor of Tokyo designated the event as a moral purgatory. Yet another sought an alternative interpretation to conspiracy theories, rumoring that it was caused by s seismic bomb by H.A.A.R.P (High Frequency Active Auroral Research Program), while survivors are still in utter shock by the magnitude of the event itself. The list can go on forever, but the point is that disaster's potential to impregnate indeterminacy "reveals underlying social regularities (or irregularities)" (Parmentier 2006: 1). The struggle of the interpretative grounds discloses "the social formation of disaster" (Button 2010: 16) in which the uncertainty of the event exposes "presupposed" (Silverstein 1979: 203) character of social codes and opens up possibilities for "creative" responses.

However, disaster or sudden change is experienced quite differently by differently situated actors (Weisaeth 1994), and this creates an asymmetrical awareness of interpretational grounds. Jeffrey Alexander in his account of narrative reconstruction processes of the Holocaust puts it succinctly, "what was a trauma for the victims was not a trauma for the audience" (2004: 221; cf. Friedlander 1993: 124). A struggle of interpretants unearths multiple levels of semiosis within social action (cf. Parmentier 1994: 126), and the asymmetrical power among varying models. It is exactly trauma that came to be differently interpreted, experienced, expressed, and valued that accentuates "semiotic encounters," that is, "the fact that a particular sign-phenomenon or communicative process connects persons to each other" (Agha 2007: 10). The very differences of trauma or the experience of disaster can precipitate "a cacophony of communications that the affected population often sees as conflicting and confusing" (Button 2010: 11) where each makes claim by appraising meaning to the experience of what has been de-scribed, though not all experiences are equally validated.

After a month and half of the disasters, society's collective reaction to them was to symbolize them as the one last standing pine tree at Takata Matsubara in Iwate prefecture in order to minimize the differences between individual interpretations of the sign and to promote collective consciousness of the event by upshifting the ground of interpretation to form a semiotic "argument." What aspect of the event is to be remembered, which image(s) comes to be highlighted, when does the interpretative ground become anchored symbolically, and who regiments and regulates the multiple degrees of semiosis? Those variables altogether reflect an underlying cultural model and asymmetrical metasemiotic awareness in determining such. In other words, disaster uncovers a buried "institutional regimentation" which stipulates the interpretative ground of signs as well as "ideological regimentation" which naturalizes an ethnosemiotic theory of semiosis (Parmentier 1994: 128) by posing pragmatic challenges to the already established semiotic arguments. Edkins (2003) nicely deconstructs the Newtonian conception of linear time as the semiotic argument of the modern nation-state in dealing with a variety of traumas. By arresting the traumatic experiences by individual victims through commemoration, the nation-state regiments the linear succession of time in promoting the act of forgetting the past and erasing subjectivity from "the experience" of disaster. That is, by stipulating the factuality of the past and manipulating the interpretative grounds, the nation-state transfers individual experiences of trauma into a collective experience of victimhood. The result is a grand narrative with the tripartite temporal succession that signifies collective lessons in the present for the future on the account of the past. But for those who are directly suffering from the disaster, its aftermath lingers on, and their living testimonies tell less complete accounts of the event than the one carefully constructed as fact. Against the historicization of the nation-state, the local project, launched in Morioka city, Iwate prefecture, A Beacon of Rebirth Poster $Project^1$ is one example of "insurrectionary and counter-hegemony" (Edkins 2003: 54) to collective forgetting or linearizing time. The visual presentation of the unnamable impacts of the disasters demands people bear witness to the victims and break an emerging chain of interpretants in fixating the referents of the disasters. Memory thus is "inherently contestatory" (Terdiman 1993: 20) and is subjected to various types of "semiotic mediation" (Parmentier 1985: 376–379), for it refers to the past that is already gone; "the referents of memory are always absent" (Terdiman 1993: 8).

Hitherto our discussion of disaster centered on a natural disaster, but what about the technological disaster precipitated by the damage inflicted on the

¹ http://fukkou-noroshi.jp/en/ (accessed 24 May 2011).

Fukushima Daiichi nuclear plant? The product of this disaster is the invisible "contamination" of already familiar signs; for example, water, air, earth, and people. Mappings of the invisible sign onto more tangible objects and the transference of pre-existing symbolism to the new reality seem to create hybrid signs. Following Porter Poole's observation of the correlation between the registration of an event to memory and accountability of experience by an existing cultural metaphor (1994, in Parmentier 2006: 3), the nuclear contamination will definitely "leave a scar" to the Japanese cultural system of signs. The propensity to seek recognition and understanding can be detrimental at times, but as Button puts it, disaster propels people to collect information in order to "make sense of the event," which is functional to "assign meaning, blame, and responsibility and develop coping strategies" (Button 2010: 11). In search of a meaning of the shock or numbness indexing the event yet to be fully experienced, the dominant's actions are carefully being monitored through the precarious condition of the nuclear plant by the subordinates whose lack of trust is counter-regimenting governmental orders, for instance, by overstocking food and water, shipping individual aids, and retesting variable radiation measurements by the government with their own instrument and/or foreign sources. The question is not whether or not signs stand for something to someone, but on what ground those signs actually legitimately mean something. In other words, despite the objective saliency of discontinuity imposed by sudden change at level of the preexisting cultural system of signs with which individuals habitually organized their world, the continuity of the overall system is constantly presupposed, or better yet appears preordained.

4 The primacy of semiosis: Cultural palimpsests

The last observation suggests that cultural semiosis, as it were, superimposes "a change in the system" on "a change of system." For instance, in order to deal with the vast numbers of dead bodies recovered, many local organizations made the decision to bury rather than to cremate them. This practice was against the habitual cultural practice and begged for a re-evaluation of the system itself. However, the discontinuity of the current cultural norm was described by the state and elaborated by the media not only as the pragmatic necessity of this particular moment, but also as, in fact, more in accordance with the traditional practice before cremation became the dominant norm. As Mukařovský observes in works of art, the norm is mediated by token-level instantiations of pragmatically anchored practices in actuality where a violation is often functional in negatively defining the hierarchy of codes within society (1979: 23–33). Sudden

confusion in the continuity of system thus seems to function in foregrounding the awareness of preexisting norms or signs in society that have been layered like a palimpsest – the multiple layers of cultural texts sedimented over times – that can be recovered in displacing "a change of system" with "a change in the system."

A stone tablet in Aneyoshi city, which has recently captivated public attention in Japan and other countries, exemplifies the up-shifting tendency of cultural palimpsests after sudden change. The tablet says "do not build your homes below this point!" (Fackler 2010), and there are many others similar to this one in northern areas that are the living testimonies of the previous tsunamis. To borrow Parmentier's (1987) terminologies, these historical markers, or "signs of history" have become the "signs in history" where the present activation of historical objects has entered the sociocultural discourse. Disaster as a zero sign opened an unlimited possibility of a new set of token-level mediations; a depository of "signs of history" is contextually made salient and transformed into "signs in history," not only by local actors, but also global actors, as is evident from the Times' article. If Parmentier's observation of an inverse correlation between "social rank and the sedimentation of evidence of change" (2006: 2) in Belau is generalizable to other hierarchical societies, then sudden change seems to destabilize the veiled semiotic regimentation by shaking its interpretative grounds and opening up possibilities for many actors in engaging with a variety of recontexualization of available cultural palimpsests to produce a new chain of interpretants in the present. In other words, those stones were interpreted as a dicent indexical sinsign - the warning for this particular disaster – when it is intended to be read as a *rhematic indexical sinsign* – a warning for any future tsunami. Another example would be the successful criticism of the government by commoners in the Edo period that occurred when the commoners' interpreted the Ansei Earthquake of 1855 as a dicisign of opportunity and recontexualized parts of mythological symbolism preceding the Tokugawa regime (Smits 2006; Ouwehand 1964), thereby proliferating a new flow of interpretants in generating a semiotic "argument" for a new order. Both cases exemplify disaster's semiotic potential in unearthing cultural palimpsests or "polypsests" (Nietzsche 2009: 104). In her effort to understand the post-earthquake recovery in Peru after May 31, 1970, Bode finds the metaphor of palimpsest fitting:

The idea of palimpsest helps to understand the mental aftermath of the disaster. Survivors dwelt among varying superimposed spheres of thought simultaneously. New ideologies blew in on the winds of change stirred by the disaster, and other meanings were constructed out of old myths. Ideas were traced one upon another, and new formulations of meaning did not displace others. Rather, meanings assigned to the tragedy were layered. The layers were not opaque but transparent. (Bode 2001: xxxvii)

The act of remembrance of what has happened becomes a series of claims of the past (i.e., of memory; cf: Lambek 1996: 248), where cultural repertoires of sign-vehicles unearth themselves to the aid in the defense against the threat of discontinuity of experience and ultimately against the impossibility of experience.

This cultural fortification against "the experience of" discontinuity precedes social regularity. That is, what continues comes to gain a regulatory power over what ceases. Oliver-Smith and Hoffman describe it accordingly: "Disaster exposes the way in which people construct or 'frame' their peril (including the denial of it), the way they perceive their environment and their subsistence, and the ways they invent explanation, constitute their morality, and project their continuity and promise into the future" (2002: 6). Instead of suspending, disaster feeds further cultural semiosis. Thom's (1972) Catastrophe theory suggests, a slow, gradual "change of system" can be separated from a few, sudden "change in the system," given the continuity of the overall system. Lotman agrees with this schema in claiming that discontinuity begets continuity (2009; cf. Andrews 2003: 35–40). However, it appears that only when disaster is interpreted *as* the event in a continuum does it signify something; otherwise it signifies neither continuity nor discontinuity, but nothing. Unmediated disaster is what Blanchot calls "the disaster, unexperienced. It is what escapes the very possibility of experience . . ." (1995: 7), but culture always attempts to mediate it by displacing its own structure, characterized by "the organization of conscious experience that is not itself consciously experienced" (Sahlins 1999: 413). Therefore, semiosis, first and foremost, models the perseverant continuity of human experience, and in this capacity it resembles the repetitive nature of trauma without closure whose sorrowful narrative "is a spiral recoiling upon itself" (Friedlander 1993: 121) that nevertheless keeps on recoiling.

5 Two modes of semiosis: Trauma and culture

Trauma and culture are isomorphic in their semiotic structure in that they both are "the experience of" continuity. However, the differences between the two are in their modes of semiosis. First culture generates a chain of interpretants outwardly, producing progressively *historical beings* with common memory (cf. Sahlins 1999: 415), whereas trauma condenses interpretants inwardly to encapsulate the past, producing *beings of history* with personalized memory. And second, for the primacy over the collective and the future, individual experiences and the living history of disaster gradually become de-scribed and overwritten. In short, culture *represents* the past by "conceiving rather the semiotic replace-

ment of one content by another that is understood to stand for" so as to bestow memory with the directionality of time, while trauma reproduces the original impression by "entailing the vertical replication and verbatim conservation of the past" (Terdiman 1993: 267–268) thereby estranging memory from its inherent fallibility and impeccable diachronicity. In both instances, understanding the social/cultural translation of disaster and its associated trauma from a semiotic perspective has to acknowledge semiosis as a premise, not as a conclusion laden with discontinuity since discontinuity is, pharenoscopically speaking, zeroth: a pure impossibility of experience. The premise informs that in order to experience disaster, culture projects interpretants outwardly by modifying past memory of the event in the present, while trauma condenses interpretants inwardly by continuously denying the future to save past memory in the present. The schism between the two grounds of semiosis is the site of struggle where differently registered and re-elaborated memories of the past become a set of claims and arguments; that is, the struggle of interpretants can be mapped onto Peircean sign classes of dicent symbol (proposition) and argument (Parmentier 1994: 18) whose permeability or transparency is indexical to a set of cultural presuppositions and a degree of trauma inflicted within a given society. Semiotic anthropology of disaster thus scrutinizes this site by tracing the social, political, and cultural shifting of semiotic grounds observable among people's claims of the past in making sense of disaster, as Terdiman puts it succinctly: "no memory, no meaning" (1993: 9). Trauma is the loyal servant; the stubborn savant of the unmediated past whose forgetful, pragmatic sibling, culture, tries to appease its uncanny ingenuousness and repetitive compulsion (cf. Freud 1958 [1914]) by historicizing and mediating memory and thus generating a chain of meanings.

6 Conclusion

In this article I have made an attempt to foreground a semiotic study of disaster. From a semiotic point of view, disaster seems to produce the two moments of the sign: *signa naturalia* and *signa data*. The translation of the sign mirrors the architectonic of the signified of disaster which is mediated by a token-level instantiation of signifiers that initially appears either absent or in excess. The conceptualization of disaster as a zero sign, that is, unlimited possibility, allows an investigation of "a struggle of interpretants" in stipulating the interpretative grounds of the signified amid regenerative processes of social regularity. It is this very exact moment of translation that the sustained continuity reveals its culture-specific "deep social grammar" (Oliver-Smith and Hoffman 2002: 10). Disaster, or more semiotically put, "shaking grounds," has the presenting effect of cultural

palimpsests. These palimpsests enable a heightened metasemiotic awareness of institutional and ideological regimentations, on the one hand, and token-level recontexualizations, assimilations, and hybridizations of the depository of signs in society in the post-disaster contexts, on the other. Disaster does not destroy a structure; it only reveals existing thick layers of sedimented structures through its defense against a threat of the experience of discontinuity, or a "change of system." The two modes of semiosis, culture and trauma, are examples of either a "change in the system" superimposed on a "change of system" or vice versa. The ability to model the directionality of time, marked by either the metamorphosis or stagnation of memory, serves as a distinct quality to demarcate the two modes of semiosis' diagrammatic resemblance to either Peircean semeiotics or Saussurean semiology. Different orders of layering are produced in either an outward or inward movement of interpretants whose continuity is fueled by a struggle to represent or reproduce memory of what was not experienced in the first instance. A semiotics of disaster thus needs to delve into various social/cultural palimpsests highlighted in a struggle of interpretants whose competitions fabricate the interpretative grounds after the shock. Peircean semiotics and Saussurean semiology can help us ground our understanding of disaster as the sign which precedes the social/cultural complexities it comes to embody or resists to embody in time, and the generative or reproductive processes of meanings disaster produces will mirror social/cultural and personal frameworks in grounding those meanings.

On a final note, if I can save Peirce from the critical blow of Parmentier's assessment (2009), semiosis is, despite its root in the investigation of logical truths and its association with the convoluted sign classes, the ground of social reality and cultural presupposition, hidden beneath the intellectual scaffoldings like those displaced letters of the palimpsest.

References

Agha, Asif. 2007. Language and social relations. New York: Cambridge University Press.

Alexander, J. C. 2004. On the social construction of moral universals: The "Holocaust" from war crime to trauma drama. In J. C. Alexander, R. Eyerman, B. Giesen, N. J. Smelser & P. Sztompka (eds.), *Cultural trauma and collective identity*, 196–263. Berkeley: University of California Press.

Andrews, Edna. 2003. *Conversations with Lotman: Cultural semiotics in language, literature, and cognition*. Toronto: University of Toronto Press.

- Augustine Aurelius. 1995. *De doctrina Christiana*, R. P. H. Green (trans.). Oxford: Oxford University Press.
- Blanchot, Maurice. 1995. *The writing of the disaster*, Ann Smock (trans.). Lincoln: University of Nebraska Press.

- Bode, Barbara. 2001. *No bells to toll: Destruction and creation in the Andes*. Bloomington: iUniverse.
- Button, Geoffrey. 2010. *Disaster culture: Knowledge and* uncertainty in the wake of human *and environmental catastrophe*. Walnut Creek, CA: Left Coast Press.
- Caruth, Cathy. 1996. *Unclaimed experience: Trauma, narrative, and history*. Baltimore: Johns Hopkins University Press.
- Chang, Han-liang. 2005. Disaster semiotics: An alternative "global semiotics?" Paper presented at the International Semiotics Institute, Imatra, 11–19 June.
- Eco, Umberto. 1984. Semiotics and the philosophy of language. London: Macmillan.
- Edkins, Jenny. 2003. *Trauma and the memory of politics*. Cambridge: Cambridge University Press.
- Fackler, Martin. 2010. Tsunami warnings, written in stone. New York Times, 20 April. http://www.nytimes.com/2011/04/21/world/asia/21stones.html?_r=2 (accessed 25 April 2011).
- Freud, Sigmund. 1958 [1914]. Remembering, repeating, and working-through. In James Strachey, Anna Freud, Alix Strachey & Alan Tyson (trans. and eds.), *Standard edition of the complete psychological works*, vol. 12, 145–156. London: Hogarth Press.
- Friedlander, Saul. 1993. *Memory, history, and the extermination of the Jews of Europe*. Bloomington: Indiana University Press.
- Lambek, Michael. 1996. The past imperfect: Remembering as moral practice. In Paul Antze & Michael Lambek (eds.), *Tense past: Cultural essays in trauma and memory*, 235–254. New York: Routledge.
- Leys, Ruth. 2000. Trauma: A genealogy. Chicago: University of Chicago Press.
- Locke, John. 2004 [1689]. *An essay concerning human understanding*, Alexander Campbell Fraser (ed.). New York: Barnes and Noble.
- Lotman, Juri M. 2009. *Culture and explosion* (Semiotics, communication, and cognition 1), Wilma Clark (trans.), Maria Grishakova (ed.). Berlin & New York: Mouton de Gruyter.
- Mukařovský, Jan. 1979. *Aesthetic function, norm and value as social facts*. Michigan: University of Michigan Press.
- Murakami, Haruki. 2000 [1998]. *South of the boarder, west of the sun: A novel*, Philip Gabriel (trans.). New York: Vintage.
- Nietzsche, Friedrich. 2009. The use and abuse of history. In *The untimely meditations (thoughts out of season)*, Anthony M. Ludovici & Adrian Collins (trans.), Dr. Oscar Levy (ed.), 96–134. Lawrence: Digireads.
- Oliver-Smith, Anthony & Susanna M. Hoffman. 2002. Introduction: Why anthropologists should study disasters. In Susanna M. Hoffman & Anthony Oliver-Smith (eds.), *Catastrophe & culture: The anthropology of disaster*, 3–22. Santa Fe: School of American Research Press.
- Ouwehand, Cornells. 1964. Namazu-e and their themes: An interpretative approach to some aspects of Japanese folk religion. Leiden: E.J. Brill.
- Parmentier, Richard J. 1985. Semiotic mediation: Ancestral genealogy and final interpretant. In Elizabeth Mertz & Richard J. Parmentier (eds.), *Semiotic mediation: Sociocultural and psychological perspectives*, 359–385. Orlando: Academic Press.
- Parmentier, Richard J. 1987. *The sacred remains: Myth, history, and polity in Belau*. Chicago: University of Chicago Press.
- Parmentier, Richard J. 1994. *Signs in society: Studies in semiotic anthropology*. Bloomington: Indiana University Press.

- Parmentier, Richard J. 1997. The pragmatic semiotics of cultures. Special Issue, *Semiotica*, 116(1/4). 1–115.
- Parmentier, Richard J. 2006. The world has changed forever: Methodological reflections on the experience of sudden change. Paper presented at the Meeting of the American Society for Ethnohistory, Williamsburg, November.
- Parmentier, Richard J. 2009. Troubles with trichotomies: Reflections on the utility of Peirce's sign trichotomies for social analysis. *Semiotica* 117(1/4). 139–155.
- Peirce, Charles S. 1931–1966. The collected papers of Charles S. Peirce, 8 vols., C. Hartshorne,
 P. Weiss & A. W. Burks (eds.). Cambridge: Harvard University Press. [Reference to Peirce's papers will be designated CP followed by volume and paragraph number.]
- Pelling, Mark (ed.). 2003. *Natural disasters and development in a globalizing world*. London & New York: Routledge.
- Porter Poole, Fitz John. 1994. The reason of myth and the rationality of history: The logic of the mythic in Bimin-Kuskusmin "mode of thought." In Frank E. Reynolds & David Tracy (eds.), *Religion and practical reason: New essays in the comparative philosophy of religions*, 263–326. Albany: SUNY Press.
- Sahlins, Marshall. 1999. Two or three things that I know about culture. *Journal of the Royal Anthropological Institute* 5(3). 399–421.
- Silverstein, Michael. 1979. Language structure and linguistic ideology. In Paul R. Clyde, William F. Hanks & Carol L. Hofbauer (eds.), *The elements: A parasession on linguistic units and levels*, 193–247. Chicago: Chicago Linguistic Society.
- Smits Gregory. 2006. Shaking up Japan: Edo society and the 1855 Catfish Picture Prints. *Journal of Social History* 39(4). 1045–1078.
- Terdiman, Richard. 1993. *Present past: Modernity and the memory crisis*. Ithaca: Cornell University Press.
- Thom, René. 1972. *Structural stability and morphogenesis: An outline of a general theory of models*, D. H. Fowler (trans.) Redwood City, CA: Addison-Wesley.
- Weisaeth, Lars. 1994. Psychological and psychiatric aspects of technological disasters. In Robert J. Ursano, Brian G. McCaughey & Carol S. Fullerton (eds.), *Individual and community responses to trauma and disaster: The structure of human chaos*, 72–102.
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Bionote

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