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# Wayfinding through Landing Sites and Architectural Bodies:

Exploring the Roles of Trajectoriness, Affectivatoriness, and Imaging Along

Reuben M. Baron,  
University of Connecticut

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What is the metachallenge that bioscleave demands of us? It is, I propose, wayfinding, a wayfinding defined at many scales from finding one's way as a person to finding one's way in a strange physical or social environment. Wayfinding both helps to clarify the meaning of certain of A/G's new terms and describes my approach to unpacking the meaning of A/G's rich discourse. The paper itself is the process of my wayfinding. I am trying to create bridges between the new and necessarily incomplete concepts that A/G are introducing and certain conceptual frameworks that I propose are useful (at least for me) in finding my way through A/G's terminological junctions.

Before beginning this analysis, it needs to be understood that for expository purposes both A/G and I discuss certain of these terms separately even though I agree with them that eventually these terms need to be considered as a system, in their terms, as an evolving terminological junction. The terminological junction must evolve because the exploration of how changes in the architectural surround are able to shape a personing organism and then are shaped *by* it, is an ongoing enterprise. Terms are constantly becoming more dynamic—an architectural body—the person defined not as an isolated unit but in the context of its being yoked to the architectural surround is not merely a structural description—it is a process description. The process of viewing architecture as an open set of architectural procedures—a provisional holding in place—forces

A/G to now talk about architectural bodying.

Further, whatever the specific concept we are dealing with, it implies one metaproperty—a sense of holding open. There always must be a space for inquiry (see Baron 2008; Adcock 2003). This is perhaps best captured in what I regard as one of the richest of A/G’s metaconcepts—tentativeness. Specifically, tentativeness implies, as illustrated in the words of the South African artist, William Kentridge, “the value of doubt ... that’s how we go through the world” (Tompkins 2010: 59). Within A/G’s discourse, it is the stuttering before change can occur; it signals that we are the cusp of change. Here we experience the greatest fluctuations as the system tries out different directions for change. Viewed this way, tentativeness aligns well with Kurt Lewin’s (1958) model of change that takes “unfreezing” of one’s initial state as the starting point for change. And more concretely, tentativeness describes an architectural procedure, a particular set of operations for manipulating the architectural surround. I now propose that tentativeness is also often the impetus for wayfinding. It can be an important energy source for our attempts to find new ways to person in the context of Bioscleave.

### **Scales of Wayfinding**

My claim is that there are many scales of wayfinding. I will treat the scales problem both vertically and horizontally. Vertically, different scales are analogous to what Vallacher and Wegner (1987) referred to as action identification. Let us take as our example of wayfinding, determining whether someone is at home. The vertical level of action is intrapersonal and is determined by the amount of planning required before the action takes place. Thus, the steps involved may vary from a very low level action like moving a finger to push a doorbell, to calling the person on the phone, to sending the person an e-mail a few days earlier to find out his/her schedule. This is not to say that there is not a fractal-like *theme* that holds across scales of action. For example, the South African artist, William Kentridge, in explaining his drawing process suggests that he not only *thinks abstractly*, but that he also *thinks with his*

*fingers, his wrist, his arm, etc.* We need to keep this point in mind as we attempt to understand certain of A/G's new concepts such as imaging along.

Now, what do I mean by a horizontal dimension? I mean that we must explore A/G's concepts not only in an intrapersonal level. Rather, we must create ever-widening circles. We need to go from intrapersonal to interpersonal—from looking at dyads to looking at groups be they families, communities, or societies. And we need to move from pragmatic to ethical dimensions. Such a dimensional shift is inescapable, given that we must navigate both social and physical surrounds. We are only worthy of a “reversible destiny” if the Other in Emmanuel Levinas' (Levinas, Poller & Cohen 2005) sense, comes along with us. If anything is axiomatic for A/G's inspired endeavor it is that old ways must change—be they habits of the mind, habits of the body, or habits of relating to the Other. And if our wayfinding is difficult and we are tempted to say that we can't go on, we must follow Samuel Beckett's admonition and somehow go on.

### **Elaborating the Meaning of Trajectoriness and Affectivatoriness**

We begin then with the likelihood that we are always in the middle rather than at point zero; we are already on our journey, but we may need to change directions. This brings us to A/G's new units of trajectoriness and affectivatoriness. Specifically, as we locomote, we seek and we are sought; we seek particular niches or behavior settings and they seek us. The niche of particular interest is Barker's (1968) delineation of a behavior setting: social-ecological units of repeated behavioral activity that have a specific time-space locus such as a classroom or a shopping mall. Behavior settings need us and seek us if they are to survive and prosper. For example, universities with certain strengths recruit certain types of students; shopping malls advertise to reach a certain demographic. And as Baron (2003) observes, shopping malls can become landing sites. Indeed, malls are in one sense prototypic. What better place is there to find landing sites nested in other landing sites? What better place to observe architectural bodies being formed out of constellations of landing sites, out of physical and social architecture surrounding people who are personing at

multiple levels? There are old people taking their exercise stroll protected from the cold weather; there are young people forming and dissolving social ties. Here we can observe how landing sites can be *both* precursors and consequences of architectural bodies. Here we can observe that “an architectural body articulates across ....many different scales of action...” (Arakawa & Gins 2006).

But, if these are end points, they are also beginnings. They drive us back to how and why it all occurs—to the constituting processes and procedures that have gotten us there. As urban wayfarers, we are driven to find our place(s) in the ever-changing surround. Here I will argue that A/G offer us the right questions while a Gibson-Baron type of ecological analysis provides at least some of the answers as to how, if not why, our wayfinding leads us to articulate, to discern, and to register where we are and perhaps where we want to be. Specifically, Baron (see Baron 2007) has been concerned with building bridges. First, from Ecological Psychology to Social Psychology and second, from Social Psychology to Ecological Psychology. Finally, I have tried to bring a social ecological approach to A/G’s discourse.

### **The Ecological Model**

First, at issue is why we follow, to use a nautical concept, certain headings? Why is there a perpetual “turning towards” – A/G’s trajectoriness? Landing sites fully rendered do more than provide a site from which to observe. They, in Celan’s (1972) terms say, “Don’t look anymore, go”. But where, why? Why are certain directions in our wayfinding attractive? Why certain paths? I propose that trajectoriness and its cohort, affectivatoriness emerge because every habitat, every niche, every behavior setting is a constellation of affordances (Gibson 1979, Baron & Boudreau 1987). I then ask, could affectivatoriness be derived from Gibson’s (1979) proposition that environments are organized in functional terms—around “what the environment offers... what it provides or furnishes for good or ill” (Gibson 1979: 123). More specifically, surrounds differ in the *opportunities for the actions* they afford, be they climbing or sitting or loving or fighting. And what’s more, we are attuned to pick up the information that

specifies the existence of such opportunities, given certain sensori-motor capabilities, experience-based inclinations, and needs that we bring to the setting. Therefore, I propose that landing sites are selected to exploit affordances at the level of individuals, groups and larger collectives. Viewed in this way, affectivatoriness may, at least in part, be driven by a hunger to achieve certain affordances. That is, affordances give *value* to particular places, turning them into attractors or repulsors. Affectivatoriness is embodied in selective, energized wayfinding. It serves as an emotional compass.

Viewed thusly, trajectoriness and affectivatoriness reflect how and why our wayfinding is *biased* in systematic ways. From this perspective, affordances are a major source of such biasing. We land where we do because here there is a meshing of our needs and response capabilities with the availability of certain opportunities for action. More specifically, affordances are the functional utilities offered to us by certain places, people, groups, settings, etc. Stated in A/G's terms, affordances spell out how we might person in ways that take advantage of what the surround offers. Trajectoriness and affectivatoriness describe our *preparations* to land in certain sites rather than others. They reflect the processes that allow us to become *attuned* to affordances as well as the processes involved in how affordance entrain and yes, even seduce us. Think about how a bumble bee is seduced to alight on a particular flower rather than another one. A/G in these precursor concepts are orchestrating such flights and through their architectural procedures, providing us with the tools to deconstruct such flights. They enable us to freeze frame the stages involved in forming a landing site on route to forming an architectural body. And lest the general point become obscured, both Gibson and A/G's concepts are about the reciprocity between organisms and their surrounds. One difference, however, is that A/G do more than take advantage of this *reciprocity*. Through their architectural procedures they are, in effect, creating new reciprocities that change the capabilities of people in ways that open new options for survival. In effect, they are giving us meta-affordances that can increase our basic adaptive capability for survival.

### **From Imaging to Imaging Along**

Given that the above account of the registering of places, of the formation of observation points, or better, launching pads, how does one move on to form the architectural body, viewed as a collection of landing sites? Such positions focus on how the person takes advantage of the architectural supports and the architectural challenges that exist as we wayfind ourselves through the built-environment. In the view of A/G, such wayfinding allows the possibility of turning the environment into a protective shell we can exploit as we locomote. Such architectural bodying is, in turn, given personal meaning through the process of *imaging along*, a process not unlike how the artist, William Kentridge uses drawing to connect multiple ways of knowing the world and ourselves.

A/G, in their recent treatment of imaging have moved from treating imaging as one of a number of ways to form landing sites, to giving imaging a more central role. Specifically, perceiving, imaging and dimensionalizing were once treated as more or less coequal ways of positioning oneself in the surround (Arakawa & Gins 2002). In their present thinking, however, imaging has taken on a more central role (A/G 2010, personal communication). Concomitant with this shift, imaging has become “imaging along”. It is my contention that “imaging along” represents a critical change in how one has to view imaging.

In order to appreciate the importance of imaging’s becoming imaging along, it is necessary to begin with traditional views of imaging and its limitations. Before I look at the classical treatment of imaging, it should be noted that in one sense, A/G’s conceptual refinement are implicit in the context in which imaging was introduced. Specifically, it was discussed in the context of landing sites. In my present terminology, this implies that imaging was in the service of wayfinding. This meant that their images were already on the go—they were already more than mere representations of the surround; they were transforming it.

Let us examine some general properties of the traditional view of imaging. Images were treated as cognitive maps—“in the head” representations that were stored cognitively, ready to be unpacked as needed. The view of an image as a

cognitive map was introduced by Tolman (1948); his maps focused on how “rats and men” represent the various paths to consumatory goals—how to get to the food. This approach was generalized in Kevin Lynch’s (1960) *Image of the City* which focused on how we create cognitive maps of familiar routes as we locomote through the urban architectural environment. For Lynch, there is a particular emphasis on the cognitive maps of familiar neighborhoods. In the traditional imaging literature, (see Roger Shepard 1984), there is a consensus that the core aspect of an image is that it is a visualization of a scene, or pattern of activity in situ such as in an urban architectural settings. To these classic views of imaging we need to add Neisser’s (1976) treatment of schemata. They serve to guide perceptual activity—where we look and what we see are shaped by these schemata. They function to tune the perceptual apparatus, thereby helping us differentiate or articulate an environment. Viewed this way, Neisser’s schemata resonate with A/G’s use of imaging as a way to register landing sites.

It should also be noted that Shepard (1984) does a superb job of achieving a rapprochement between Gibson’s ecological view of perception and the operation of imaging viewed as internal representation. Shepard suggests that perceiving and imaging may both be constrained by higher-order informational invariants that have evolved to guide locomotion. For example, both imaging and perceiving utilize information that specifies kinematically the rigidity or non-rigidity of the environment—such as the ability of a surface to hold its shape over different environmental stressors. More generally, Shepard attempts to specify the boundary conditions for the perception-based versus imaging-based pick up of higher-order invariants. Shepard proposes that whether internal representations are necessary, including imaging, depends on the conditions of observation. Specifically, perception has primacy under favorable viewing conditions whereas representational processes including imaging, going beyond the information given (Bruner 1957), occur under unfavorable viewing conditions. These may be situational problems, for example, a heavy fog or the individual constraints faced by A/G’s blind mathematician.

### **Problems with the Traditional View of Imaging**

There are a host of problems with cognitive mapping-type interpretations of imaging. Specifically, a key functional problem is “that in imagery, physical feedback from the environment is missing, information is detached from its situation, and reality testing is suspended” (Jordet 2003; Loooran de Jong 1991). Imaging, if it is detached from action, provides less information than perceiving, given that there are perceiving-acting cycles where what we see guides our actions and our actions, in turn, provide new information for where to look. That is, what we do affects what we see and what we see affects what we do. Such cycles lead us to register new landing sites that shape our subsequent actions and perceptions.

The above distinctions between imaging and perceiving it should be noted, have greater force relative to A/G’s treatment of imaging in their past publications, *Architectural Body* (2002) and *Making Dying Illegal* (2006), than in A/G’s (2010, personal communication). Current treatment of imaging along, their most recent theorizing, describes imaging as highly embodied and not detached from action and online feedback. In their current view, imaging along seems to occur in real time. For example, when “I walk down the street—I am imaging along the happening of this” –that is, we are looking at ourselves looking (2010, personal communication). Such imaging along is also unlike classical imaging in that it is not detached from environmental information. Indeed, A/G suggest architectural procedures for stretching or prying apart imaging along, suggesting that imaging along can be quite malleable under certain architectural conditions.

Further, and this is crucial, imaging for A/G is not simply a top-down process. Imaging can be dispersed—decentralized. Images can be organized heterarchically rather than hierarchically. This means that images are not limited to the visual. For example, unlike Lynch (1948), both A/G (2010, personal communication) and Ahsen (1977) emphasize that images have a somatic component that represents body feelings. Specifically, imaging for A/G is multisensorial. It involves smells, tactile remembrances, etc. They are all part of imaging along. A/G differ from Ahsen’s somatic imaging which looks backward.



It involves imaging feelings linked to past scenes of traumatic family conflict. A/G's images look forward. The power of such imaging is illustrated by A/G's blind mathematician who imaged a difficult puzzle well enough to derive a solution strategy. This type of imaging literally lets "our fingers do the walking". That is, images in A/G frame are broadly embodied from "head to toe", so to speak.

Further, the somatic aspect of imaging is also illustrated when A/G write of landing sites that are dimensionalized. We can read this as an image based on experiencing an object against the scale of one's body. For example, we often insert a person in a photograph to indicate the scale of buildings or sculpture. What is at issue is registering "location and position relative to the body" (Arakawa & Gins 2002). Thus, and this is crucial for A/G's "imaging along", imaging is embodied in how we make contact with the surround. This helps explain how it is that imaging along becomes connected to landing sites trajectoriness. Viewed this way, imaging along functions both retrospectively as a Proustian type record of "lost time" and prospectively as a guide to subsequent proper action involving the development of an architectural body that encompasses changing the surround.

### **Possible Residual Problems**

A/G switch to "imaging along" and their broadly embodied view of imaging deflects many of the problems raised by critiques of imaging. Similarly, I have no problem with A/G's view that the same landing site might be simultaneously registered at conceptual, visual, and tactile levels. As a Gibsonian, I agree. However, problems do arise when a judgment needs to be made about whether landing sites are primarily formed by imaging or perceiving. In an exchange of letters with A/G (2006), I disagreed with their proposition that "perceiving grows out of imaging". This priority of imaging may be true functionally in an online situation such as in Neisser's (1976) model where perception is schemata-guided (but note that even here, the results of perception yield feedback that may modify the schemata). However, developmentally it is not true. Perception is

foundational at the levels of phylogeny and ontogeny for reasons I will presently make clear. I did then, and still now, argue for the primacy of perception. Without rehashing my argument (see Arakawa & Gins 2006: 110), I suggest that in the development of the brain, structures supporting perception, for example, the brain stem, evolved many eons before the development of the prefrontal lobe capacity necessary to support higher order imaging. This is also likely to be true developmentally at the level of ontogeny. That is, the infant's brain is likely to support perceptual knowing prior to imaginal knowing if one takes imaginal knowing to require the existence of Piagetian types of cognitive schemata. Such a critique is blunted if one takes a broader view of imaging as involving at its inception, a host of sensory embodied ways of knowing. For example, imaging may early on involve what might be described as perceptual-sensory imaging, the kind of imaging that Helen Keller learned to do so well. However, this type of interpretation of imaging is vulnerable to Gibson's (1979) claim that imaging "is an extension of perceptual knowledge". That is, sensori-motor and tactile information are integral to Gibson's (1966) view that the senses be treated as a perceptual system.

Further, images, to the extent they become conceptual; and I would still argue that normal adult imaging is heavily conceptual, can become rigid and create problems when the current circumstances don't meet the expectancies induced by the images. It is one thing to claim that images can be stretched. It is also possible that schemata-type concepts like images can become stereotypes leading us to ignore changing circumstances that don't fit past images (see Taylor & Fiske 1984). Again, this problem would not apply to imaging that primarily occurs at a sensori-motor level as in the "muscle memory" for bike riding.

In sum, framing the problem in terms of a broad view of imaging along suggests a closer correspondence between A/G's discourse and the Gibson-Baron ecological approach. For example, both perception and such imaging along are tied to behavior. I prefer to let future research resolve the differences that still exist regarding the primacy of imaging versus perception in the epistemology of landing sites. In any given situation, the issue then becomes the extent to which

meaning is constructed through imaging or detected through a perceptual apparatus that is able to use the information already in the surround to pick up on the availability of affordances that can direct wayfinding. As noted earlier, these distinctions become blurred when imaging is dispersed to our fingers.

### **Ethics, Sociality and the Processes of Forming an Architectural Body**

Another point raised in my exchange of letters with A/G (2006) is just how to incorporate a moral dimension. Towards the end of our exchange, A/G raised the issue of ethical affordances and ethical landing sites. At one level A/G provides us with the ultimate ethical contribution—"going beyond this mortal coil" and evading dying. Further, aspects of their approach to architecture are derived from a strong reaction against the horrors of mass killing, whether they occurred in Hitler's Holocaust or the United States' dropping atomic bombs on Japan in the context of wanting to end World War II with a minimal loss of United States' lives. Clearly the dignity and preciousness of life is an ethical stance intrinsic to their open and provisional approach to architecture (see Keller, Knesl, Lynn & Reiser 1997). It is clearly a more ethical architectural approach than often occurs under the aegis of aspects of modernity with its authoritarian aesthetics. For example, what kind of architectural body could come out of a 50-story concrete and glass rectangle? The fact is that urban renewal projects using the modernist architectural model have led to the horrors of public housing such as Pruitt-Igoe where due to rampant vandalism and crime, a relatively new set of buildings had to be demolished. Clearly, there is an ethical component to architecture and A/G's "provisional holding in place", with its multifaceted architectural procedures are the very antithesis of the modernist approach. Their procedural architecture fairly exudes a democratic ethos. It should also be noted that A/G's models for future buildings include plans for a community where different architectural procedures could be experienced by shifting from one building to another. Such an approach would likely enhance A/G's metastrategy of keeping people open to change through tentativeness-inducing procedures.

Thus A/G have provided an architecture that affords ethical, life-enhancing

living at the individual and the communal level. However, there are some possible omissions that have ethical-moral implications. A/G have not yet sufficiently explored a relational level of analysis such as incorporating Buber's (1970) "in the beginning there is the relation" and Levinas' Other (Levinas, Poller & Cohen 2005) in their discourse. Specifically, it may be claimed that when a person is both sited and situated this is the beginning of moral responsibility. To have a place in most surrounds means that we are placed in relation to actual others – the Other, towards whom we have an obligation to be concerned about. A/G need to move from postulating an organism that persons to an organism that interpersons (Baron 2005). Specifically, a personing organism has social concerns but they are expressed from the point of view of the I and not the "we". For example, A/G's instruction "act as if you are an organism that persons who lives in a community" (Gins 2010, personal communication) is a step in the right direction. However, this is not a socially shared cognition where we act *with* the other. Only the interpersoning organism recognizes that landing sites are potentially windows of environmental opportunity that specify points of joint entry into the social surround. For example, selecting a landing site, affords the possibility of *social power*. Sitting at the head of the table allows a person to dominate the flow of information. Such situations, when regularized in a broader setting such as a classroom, become the modules out of which a Behavior Setting (Barker 1968) is organized. Indeed, Behavior Settings promote landing sites both "top-down" and "bottom-up". A classroom provides a "top-down" dispersal of landing sites because it is hierarchical. A teacher situated in the front of a row of seats and students positioned "down stream" can be seen as leading to the formation of different landing sites for teachers and students. Further, team play may provide an opportunity for shared landing sites to emerge. Indeed in Baron (2005), I suggested that an important neglected dimension of cooperation is shared conceptual-perceptual partitioning of the environment. This treatment of landing sites can create a "mutually shared social field" (Asch 1952). It opens the possibility of devising architectural procedures that facilitate such coordinations (Baron 2005).

Building on these arguments, I propose that social constraints do more than

define moral obligations and coordinate landing sites. In Caporael and Baron's (1997) terms, "the group is mind's environment". There is evidence for example that we indeed have a social mind. Specifically, Dunbar (1993) presents evidence that it was increasing group size that led to increased size of the prefrontal lobes with concomitant shifts from nonverbal communication to the emergence of language and abstract thought. Viewed in this way, our wayfinding is ultimately a social enterprise. We form landing sites and architectural bodies to realize our social needs and obligations. *We image along to get along.*

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### **Bibliography**

Adcock, Craig. "The Meaning of Blank in Arakawa's Early Work." *Interfaces. Architecture Against Death (Special Issue)* 22.1 (2003): 203-217.

Ahsen, Akhter. *Psycheye*. New York: Random House, 1977.

Arakawa and Madeline Gins. *Making Dying Illegal: Architecture Against Death: Original to the 21<sup>st</sup> century*. New York: Roof Books, 2006.

Asch, Solomon. *Social Psychology*. New York: Prentice Hall, 1952.

Barker, Roger. *Ecological Psychology: Concepts and Methods for Studying the Environment of Behavior*. Stanford, CA: Stanford University Press, 1968.

Baron, Reuben M. "Towards a Social Ecology of Landing Sites and Architecture

Bodies." *Interfaces: Architecture Against Death* 22.2 (2003): 435-442.

Baron, Reuben M. "Situating Coordination and Cooperation Between Ecological and Social Psychology." *Ecological Psychology* 19 (2007): 179-199.

Baron, Reuben M. "The Role of Tentativeness in Perceiving Architecture and Art: A Far-From-Equilibrium Ecological Perspective." *Ecological Psychology* 20.4 (2008): 328-342.

Baron, Reuben M. and Louis Boudreau. "An Ecological Perspective on Integrating Personality and Social Psychology." *Journal of Personality and Social Psychology* 53 (1987): 122-128.

Baron, Reuben M. "Extending the Social Ecology of Landing Sites and Architecture Bodies of Coordination, Cooperation and Trust." Unpublished manuscript, 2005.

Bruner, Jerome S., Egon Brunswik, Leon Festinger, F. Heider, K. F. Meuenzinger, C. E. Osgood, David Rapaport. "Going Beyond the Information Given." In *Contemporary Approaches to Cognition: A Report of a Symposium at the University of Colorado*. Eds. Jerome S. Bruner, et al. (May 12-14, 1955). Cambridge, MA: Harvard University Press, 1957.

Buber, Martin. *I and Thou*. New York: Scribner, 1970.

Caporeal, Linnda R. & Reuben M. Baron. "Group as Mind's Environment." In *Evolutionary Social Psychology*. Eds. Jeffry A. Simpson and Douglas T. Kenrick. Hillsdale, NJ: Lawrence Erlbaum Associates, 1997.

Celan, Paul. *The Straightening: The Poems of Paul Celan*. Trans. Michael Hamburger. New York: Persea Books, 1972.

DeJong, Looren. "Intentionality and the Ecological Approach." *Journal for the*

Reuben M. Baron. "Wayfinding through Landing Sites and Architectural Bodies." 280  
*Inflexions* 6, "Arakawa and Gins" (January 2013). 267-282. [www.inflexions.org](http://www.inflexions.org)

*Theory of Social Behavior* 21 (1991): 91-109.

Dunbar, Robin. "Coevolution of Neocortical Size, Group Size, and Language in Humans." *Behavioural and Brain Sciences* 16 (1993): 681-735.

Fiske, Susan and Shelley E. Taylor. *Social Cognition*. New York: Random House, 1984.

Gibson, James Jerome. *The Senses Considered as Perceptual Systems*. Boston: Houghton, 1966.

Gibson, James Jerome. *The Ecological Approach to Visual Perception*. Boston: Houghton-Mifflin, 1979.

Gins, Madeline and Arakawa. *Architectural Body*. Tuscaloosa, AL: University of Alabama Press, 2002.

Jordet, Geir. "Perceptual Training in Soccer: An Imagery Intervention Study with Elite Players." *Journal of Applied Sport Psychology* 17.2 (2005): 140-156.

Keller, Ed, Johannes Knesl, Greg Lynn and Jesse Reiser. "Four Architects on Reversible Destiny." In *Reversible Destiny*. Eds. Arakawa and Madeline Gins. New York: Harry N. Abrams, 1997. 215-221.

Levinas, Emmanuel, Nidra Poller and Richard A Cohen. *Emmanuel Levinas: Humanism of the Other*. Urbana and Chicago: University of Illinois Press, 2005.

Lewin, Kurt. "Group Decisions and Social Change." In *Readings in Social Psychology*. Eds. Eleanor E. Maccoby, Theodore M. Newcomb and Eugene L. Hartley. 3<sup>rd</sup> edition. New York: Holt, 1958. 199-211.

Lynch, Kevin. *The Image of the City*. Cambridge, MA: MIT Press, 1960.

Reuben M. Baron. "Wayfinding through Landing Sites and Architectural Bodies." 281 *Inflexions* 6, "Arakawa and Gins" (January 2013). 267-282. [www.inflexions.org](http://www.inflexions.org)

Neisser, Ulric. *Cognition and Reality: Principles and Implications of Cognitive Psychology*. San Francisco: Freeman, 1976.

Shepard, Roger. "Ecological Constraints on Internal Representation: Resonant Kinematics of Perceiving, Imagining, Thinking and Dreaming." *Psychological Review* 91 (1984): 417-447.

Tolman, Edward C. "Cognitive Maps in Rats and Men." *Psychological Review* 55 (1948): 189-208.

Tomkins, Calvin. "Lines of Resistance." *New Yorker* (January 18, 2010): 52-59.

Vallacher, Robin R. and Daniel M. Wegner. "What Do People Think They're Doing? Action Identification and Human Behavior." *Psychological Review* 94 (1987): 3-15.