

## **Traces Left by Herbert Brün that Orient my Cybernetics (maybe)** Judith Lombardi 2020

Composing, whenever I wish to speak of the composer's  
activity and the traces left by it. - Herbert Brün 2004a

### **Abstract**

**Purpose:** Herbert Brün was a composer of many things including electronic and computer music. His compositions were, by design, nested in his passions for designing a new society – without violence. In this article, I attempt to address several of Brün's concepts relevant to his desire for social change. This paper was stimulated by a panel discussion about Brün at the 2018 American Society for Cybernetics conference "Framing a Reality and How It Matters in a Shared World."

**Design/Methodology:** Herbert Brün nested his communication in what he labeled "anticommunication," which requires a listener to generate new ways of listening. As a video-ethnographer I had many opportunities to videotape Brün, beginning with our first encounter at the 1992 American Society for Cybernetics Conference in Washington state. During the past several decades I have composed a variety of movies in which I use video footage of Brün and others I associate with cybernetics. Excerpts from many of these movies are embedded in the links located in the References section of this paper.

**Findings:** Brün's cybernetic formulations for designing social transformations explored in this paper include his ideas on floating hierarchies, anticommunication, his notions on a circularity of needs, peace as a need, articulating desires, composing as an element of daily life, and the retardation of decay.

**Value:** It is the author's desire that this article encourage the reader to explore some of Herbert Brün's formulations for designing social change and transformations.

## **Traces Left by Herbert Brün that Orient my Cybernetics (maybe)**

Composing, whenever I wish to speak of the composer's  
activity and the traces left by it. - Herbert Brün 2004a

The Kybernetes journal issued a "call for papers" for a special edition based upon the 2018 meeting of the American Society for Cybernetics (ASC) in Chicago. In honor of Herbert Brün's 100 birthyear, this meeting included a panel discussion on his teachings about how to compose social transformation of a society – without violence. As a student of Herbert Brün and a videoethnographer who composes movies that include Brün, I was a participant on this panel.

In this paper, I shall tell what I think while remembering Herbert Brün. The reader may be challenged by the syntax of the language. This is the author's intention, a way to honor Brün's desire to create a new and/or more honest language.

I video-taped Brün in various settings for a decade. He inspired the language in my Ph.D. dissertation “from what to when is not violence.” Although he died in 2000, this paper provides a visual context for the reader to observe Brün when clicking-on the video links in the Reference section. I hope these links help the reader understand Herbert Brün, his syntax and why he says what he says the way he says it.

In essence, Herbert Brün was a composer of music and language. He used music and words to create juxtapositions that triggered peoples’ thinking about their use of language itself. He would invite every I to create, compose, design and perform daily life in ways that might generate the social change they desired.

While a professor of music composition at the University of Illinois in Urbana-Champaign, Brün participated in many of the cybernetic activities carried out by those associated with the Biological Computer Lab, organized by Heinz von Foerster during the 1960s and 70s. This relationship influenced Brün’s emergence as a pioneer in the composition of electronic computer music as well as his cybernetic thinking, acting and formulations.

When presenting a topic, he would often play one of his compositions, then offer a formulation, thereby establishing a connection between the two. He spoke in ways that provoked his audience to wonder, get angry, remember, and eventually do something with that formulation in their future.

Brün’s preferred means for communicating was anticommunication, a concept he coined in response to the predictable chaos and violence he associated with traditional communication. He argued that our prevailing everyday language carries with it violent tendencies. It was intentional on his part (as it is with this author when writing this paper) to manipulate the language we currently have in ways so that it might provoke something unique, since a slight change in language can generate a ripple effect in our languaging spaces.

One of Brun’s formulations was a linguistic twist in which “I” is used in the third person. For example, instead of saying “I think,” he would say “I thinks,” thus creating a sentence that is both personal and public (including others) in the same moment.

Other Brün formulations explored in this paper include his ideas on floating hierarchies, a circularity of needs, peace as a need, the retardation of decay, the articulation of language and desires when designing social transformations – without violence.

Cybernetics, the ability to cure all temporary truth of eternal triteness.  
Herbert Brün (Richards 2009a)

To contextualize and clarify Herbert Brün’s concepts and formulations, this paper includes quotes, articles and video links of others I associate with cybernetics. These others include Gregory Bateson, Heinz von Foerster, Ernst von Glasersfeld, Marianne Brün, Gordon Pask, Gertrude Stein, Humberto Maturana, Mary Catherine Bateson, Kathleen Forsythe, Albert Muller, Paul Pangaro and Larry Richards.

## Composing

Herbert Brün the composer.

The composer is motivated by a wish of bringing about  
that which without the composer and human intent would not happen.  
Herbert Brün 2004b

Communication, a constraint when wanting to compose insights.

Anticommunication offers a listener a not yet decoded languaging that goes beyond what one knows. It is an attempt to invite listeners to generate something radically different. It is an honest attempt at seducing listeners to engage.

Since it is language it is in a way lost. Lost it is on the communicative level because you will make it part of your repertory so I can't tell you anything you couldn't tell yourself. In order to make that not happen *you* have to give *my language* a chance that it is not yet in your repertory the way I did it. – Herbert Brün 1994a

Herbert Brün the anticommunicator.

He coined the term anticommunication as an offer, not as a refusal.

*Communication* feeds on, and speeds, the decay of information in systems on which depends the significance of human relations.

*Anticommunication* not only retards this decay, but even creates systems whose significance depends on human relations.

Insistence on *communication* ultimately leads to social and physical violence.  
*Anticommunication* ultimately leads to the insistence on *composition* and peace.  
Herbert Brün 2004c

Brün's compositions are provocations nested in anticommunication.

His desire to anticommunicate moves thinking away from the traditional definition of cybernetics nested in language, control and communication toward a definition that reflects a second-cybernetics nested in observing, autonomy, responsibility and ethics.

Without being an observer responsibility has no meaning.  
Herbert Brün (Smith 1975)

Observing, autonomy, responsibility, the beginnings of a second-cybernetics provoked by Margaret Mead, articulated by Heinz von Foerster, enacted by Herbert Brün.

Cybernetics is enacted in conversation.  
Larry Richards 2010a

Conversation, asynchronistic dynamics in languaging that evolves into synchronicity.

I find three categories for the word conversation useful: a conversation we have with ourselves, a conversation we have with another, and a conversation we have with society. In each case, the “we” is a role or perspective temporarily taken (Gordon Pask’s p-individual). In each case, the dynamic is similar—a back-and-forth interaction in a language starting with an asynchronicity moving toward synchronicity. – Larry Richards 2009b

Herbert Brün the conversationalist.

Brün loved to provoke conversations. He would make a case for conversation to emerge through his confrontational performances. In this context, conversation begins with asynchronicity when a respondent experiences being “out of sync,” conflictual, or oppositional in a present languaging interaction. Asynchronicity generates conversation when a respondent, which may be oneself, is comfortable with the uncomfortableness of asynchronicity and perceives it as an invitation for generating something unique.

Anticommunication Imperative  
If you seek the new compose asynchronicity.  
Larry Richards 2010b

Asynchronicity, a point of departure (What’s the message?) for insights to emerge.

When thinking about how Brün’s cybernetics might fit with the conference theme of “Framing Reality and How It Matters in a Shared World,” an asynchronicity emerged.

This author is *not* interested in “framing reality” as we usually define it vis-à-vis a premise that assumes there is some sort of Objective world out there that I can capture, frame and share with others. That would be so *not* cybernetic. I am not saying this is what was meant by those designing the conference, only what I heard.

I *am* interested in telling stories that reflect being an observing being, generating, composing and living an experiential reality that I long to share with other listeners.

As long as we do not claim the knowledge of absolute truth,  
and while believers can not but make liars, listeners make storytellers  
tell stories and make composers compose music. And they know it.  
Herbert Brün 1986a

Herbert Brün a new kind of politico.

Brün composed inputs, compositions that go against the status quo in that they produce a change in a system that the system itself could not have generated.

So, the output is the conformist political action which always reaffirms that system in which it emerged; the input is always critical, disturbing, and never heard of—in that system to which it is directed. – Herbert Brün 1977

Brün's ideas that resonate deeply with me at the moment include: 1) his model for floating hierarchies when wanting to increase freedom and decrease power; 2) his notions on the nature of entropy and composing the retardation of decay; and 3) his concept of peace as a need in relation to a circularity of needs, desires and necessities for meeting needs. All reflective of his desire to anticommunicate – provoke information.

Information consists of differences that make a difference. – Gregory Bateson 1972

Nature, entropy and responsibility when composing the retardation of decay.

When responsibility means being aware of all the needs of oneself in order to maintain one's existence, then the role of the composer is to retard the decay.

Herbert Brün (Smith 1975)

Brün inferred that the concept of entropy had been invented, not only that it measures but what it measures. It is a technique for explaining the nature of decay; everything decays, including information vis-à-vis communication. Yet in our current language we ignore the nature of decay. It is a composer's responsibility to act in ways that retard decay.

The retardation of decay is concerned with systems and their withering away when you have asked them all the questions. We say they lose it, when in fact, we lose it. But this is the English language in that it always gives power to someone else. It's treason. – Herbert Brün 1994a

Agreement another form of entropy, like synchronicity, doesn't provoke anything new.

Agreement is a non-violent way of making another person superfluous.

Have you ever met a conflict in which people did not agree on the bone of contention? Agreement is fatal. – Herbert Brün 1994a

Herbert Brün the radical.

If you knew Herbert, you knew he was a language freak. He longed for a non-violent revolution and desired a new and/or more honest language. So, he created a lexicon, a personal language he loved to share with others. Yes, he loved to share, drink, play piano, compose, perform and provoke conversation about a society in which everyone and every word matter.

So, there is an undesirable present. How can one let a presence transform itself into a more desirable present? There is always the question of radical change, radical change takes place in the mind. – Herbert Brün (Lombardi 1996a)

He longed for a language that articulated needs, necessities and desires. He invited others to conspire with him in this endeavor, often provoking us to express our wants, needs, necessities and desires.

## Articulating Needs

Do not tell us what we need, instead create a context where we can tell what we think we need. Create the necessary context wherein whatever we say, however we utter it... Even in our mere existence where we are objects – where we need to be subjects – don't tell us, create a context for us to tell. – Herbert Brün 2004e

Needs – something that must be met so it can happen again and again.

Wants – an absence of something desirable even though I will survive without it.

Desires – an awareness and articulation of one's needs, wants, and necessities.

Necessities – become apparent when knowing and articulating what one desires.

Cybernetics is radical when embracing opposing ideas and provoking conversations.

At the 2014 ASC conference Mary Catherine Bateson articulated that cybernetics is a means for composing radical alternatives that make it possible for us to work together and meet the challenges we face as a society. Radical ideas for addressing the erroneous commonsense beliefs that are killing us. Like the idea that independence is not only possible but desirable when our experience as observing beings clearly indicates we are never outside the ecology in which we live – we are always a participant of it. (M.C. Bateson 2014)

Cybernetics, a radical transdisciplinary approach for articulating, composing, and designing alternatives to common sense erroneous ideas that are literally killing us. Historically cybernetics meets the criteria of a transdisciplinary model; it develops its own language, embraces a variety of disciplines with no one discipline above or dominant over the others, it explores a wide range of ideas, interests and applications. (Müller 2010)

Too often we don't find it easy to engage in conversation. Participants come to an interaction with their experiences, disciplines, jargons and perspectives. It's not easy to turn together with our differences since our commonsense ideas and beliefs often prevent us from doing so without violence or the fear of it. Yet we *need* to do so.

At the 2011 Occupy Movement in New York City, Angela Davis asked participants, how do we come together in community, respect one another, celebrate our differences and generate a language and unity that is complex and emancipatory? She then quoted Audre Lorde.

Differences must not be merely tolerated BUT seen as a fund of polarities between which our creativity can spark like a dialectic.

Audre Lorde (Davis 2011)

Brün's concept "floating hierarchies" presented at the 1982 ASC conference, is both a formulation and a model for creating a dialectical space where opposing ideas, different disciplines, and diverse participants can generate participatory conversations. (1982)

It is not the historical circumstance in which we now live, nor the laws of nature (for economic laws are an arbitrary human creation), nor lack of sociological imagination that limits us in the effort of creating a non-hierarchical utopia. It is our reluctance to abandon our culturally learned and deeply cherished joy of forcing other human beings to accept our pretended superiority. – Humberto Maturana 1974

Cybernetics is radical when it goes against the erroneous belief that knowledge is useless, unless it is a picture of an external Objective world. Because at its core is observing, be it explicit or not (it's always implicit) – knowledge is what one knows and there is no getting out of it – cybernetically.

Science is radical when including the cybernetics of oneself, our families, cultures and societies in its reports. A praxis that is in direct *contradiction* with the scientific principle of Objectivity which demands that an observer's observations not enter into their descriptions. (Foerster 1992)

I'll never forget Herbert Brün insisting that conflict requires a change *in* a system, whereas contradiction requires a change *of* a system. (2004d)

Heinz von Foerster also suggested that when looking at our looking, we realize that it is I who is responsible for how I thinks and acts. An origin of ethics. (Foerster 1992)

Objectivity, a popular device for avoiding responsibility while telling others what to think or how to act (morals).

Ethics Morals Manners  
I shall, you should, we do.

The concept of Objectivity is so pervasive in our language that even when we reject the epistemological position of an independent external reality the inertia of language conserves the language of Objectivity. (M. Brün 2004)

In our social worlds things is what's said about them.  
– Herbert Brün 1995b

Three radical cybernetic concepts, relevant to Brün's cybernetics, explored in this report are: 1) Objectivity is an illusion; 2) peace is a need; 3) love is our fundamental emotion.

## **Objectivity is an Illusion.**

Objectivity is the delusion that observations could be made without an observer. – Heinz von Foerster 1978

## Constructing

When I think of radical alternatives to Objectivity and knowing I think of Ernst von Glasersfeld and radical constructivism.

Radical constructivism does away with the traditional conception of communication. – Ernst von Glasersfeld 2001

Radical constructivism is radical in that it requires a fundamental shift in one's thinking when thinking about knowledge and how we come to know what we know.

Epistemology, always personal. (Donaldson 1992)

One cannot come back too often to the question what is knowledge and to the answer, knowledge is what one knows. – Gertrude Stein 1935

At its core, radical constructivism assumes knowing and learning entails an active cognizing, adapting, self-organizing subject who through experiences with others generates an experiential reality.

Our senses only tell us how much, never what. Hence, it is we who generate the qualities out of which our experiential reality is built.  
Ernst von Glasersfeld 2003a

An extension of Jean Piaget's work, radical constructivism assumes knowing involves creating and maintaining a cognitive equilibrium vis-à-vis a process of adaptation, assimilation and accommodation. (Glasersfeld 2003c)

Cybernetics the art of creating and maintaining equilibrium in a world of constraints and possibilities. – Ernst von Glasersfeld 2003b

Adaptation, a dynamic biological process that involves a subject's ability to retard their decay when generating viability. Viability, whatever it is that allows a subject to create and maintain *their* equilibrium. (Glasersfeld and Lombardi 2010a)

When a subject's viability is reassured, while engaging with others who have compatible viability notions, an intersubjectivity emerges. (Glasersfeld, 2010b)

You are one subject and I are the other subjects.

Every I is actively co-constructing an experiential reality within the constraints and possibilities in which I lives an intersubjectivity. I makes choices. Makes not make.

Any I, third person singular, I makes the choice. You is the reader who has to discern whether you are being dealt a batch of language or a communication of thought or an attempt of seduction. You have to interpret continuously and with great pleasure and that's where agreement becomes pale in comparison. – Herbert Brün 1994a



Assimilation, dynamic cognitive responses that emerge when a subject's interactions are *viable - fit* with the subject's current patterns for knowing, schemes (synchronicity). Schemes, constructed patterns of thoughts and beliefs that are interdependent on a subject's non-trivial, bio-historical dynamics.

Accommodation, a dynamic cognitive process that emerges when a subject's *viability no longer fits*, (asynchronicity) for whatever reason, be they changes in a context, changes in a subject's internal dynamics, or, a mystery. So, in order to retard their decay, the subject adapts when revising their cognitive schemes and synchronicity emerges.

### A Circularity of Knowing

In conversation on 8 March 2019, Paul Pangaro stated that sometimes putting on the brakes doesn't require conversation, but reflects a synchronization of *a priori* asynchronous process.

I remember Heinz von Foerster declaring that *the* fundamental concept of cybernetics is **circularity**.

### A Circularity of Needs

Herbert Brün invented a formulation for retardation of decay when declaring needs as conditions that must be met in order for living to be continuous. And, as circularity goes, needs must be met with whatever is necessary for meeting that need so they can happen again and again – **necessities**.

I use the word 'necessity' whenever I wish to speak of something which is to meet the conditions called "need", or whenever I wish to emphasize, by metaphorical analogy, the urgency with which I wish to establish a relation or a connection found missing.

Herbert Brün 2004f

### **Peace is a need.**

Brün argued that in our current reward-oriented-hierarchical societies, peace is considered something to be achieved. You have to do something to earn it.

If we could declare peace one of the needs, like hunger, which has to be met by food, and thirst, which has to be met by drink, tiredness which has to be met with sleep.

You sleep so you can do something in order to become tired again. So this is the definition of needs. Needs are conditions that have to be met so that they can happen again. They are one description of life. One. Not the only one.

If we could have peace sorted into the table of contents of needs it would give us a different English language.

– Herbert Brün 1994a

Brün proposed that when peace is a need it must be met with our conflicts.

We have to learn a language, we have to find a method of languaging,  
which does not assume peace as a reward but as a condition for conflict.  
– Herbert Brün 1994a

It is necessary to meet our need for peace with our conflicts, disagreements, our asynchronicities.

### A Circularity of Necessities

When peace is a need our asynchronicity is a necessity for meeting the need for peace. When asynchronicity is a need, conversation is a necessity for meeting the need for asynchronicity. When conversation is a need, generosity is a necessity for meeting the need for conversations, and when generosity is a need, the biology of love is a necessity for meeting the need for generosity.

Generosity is expansiveness. It is freedom from smallness of mind. It is openness to newness, and respect and delight in our difference of understanding because these differences mean the conversation can continue! – Kathleen Forsythe 1989

Peace is a need, one premise for the evolution of our dialectical relationships in love.

### **Love, our fundamental emotion.**

I met Herbert Brün and Humberto Maturana when attending my first ASC conference in 1992. The entire conference was about their cybernetics. (Brün, et al 1992)

There was Herbert Brün, the composer, focusing on distinctions, links, conflicts, and contradictions – all nested in anticomunication. And, Humberto Maturana, the biologist, explaining experience, observing, emotioning, and love – all nested in living systems as structural determined entities in a medium he refers to as humanness. (Maturana 1992a)

### Explaining Experience

Maturana was clear: we human beings are observing beings. It is our biology. We operate while living immersed in language which allows us to construct and explain our experiences. Two phenomenal domains for observing, the domain of experience which is dynamic thus unexplainable, and the domain of explanations, the language of logics.

Maturana described any dynamic observed in the relational space of humanness, regardless of species, emotioning. Emotioning, any and all body dispositions observed in the relational space of humanness. Hence all living systems are emotioning beings in the domains in which they exist and the fundamental emotioning of all living beings is the biology of love.

When observing our being in daily living, the biology of love is our natural way of being.

I am an optimist because I think that in the core of human life and mammalian life in general the biology of love is fundamental. The biology of love, the domain of relations in which the relations and dynamics are such that those involved are legitimized.  
Humberto Maturana 1992b

Maturana speculated that living in the biology of love might have generated a relational space for languaging and thus humanness to emerge in our evolutionary ancestors.

The biology of love, an invitation for cooperation even in the midst of asynchronicity.

Sooner or later we fall back into the biology of love  
or we disappear. – Humberto Maturana 1992c

Throughout the 1992 ASC conference I was dazed. Not, yet, understanding the presenters' offers, and intuitively knowing that their propositions *fit* with what I was looking for when wanting a healthy explanation for nature, knowing and behavior.

I remember dinner the first night, Larry Richards explaining observing in a way that changed my thinking about thinking forever. Truly an accommodating experience.

I remember Maturana saying that his explanation for “when is human being” was a form of anticommunication.

Scientists play as if they were only scientists when they are not. So, my only possibility, using Herbert's expression is to anticommunicate. To use my words in such a way that I force them to mean what I want. And to force them to mean what I want I have to create a whole condition in which they mean what I want. Curiously enough, I want them to mean what they mean in daily life. And the problem with scientists is that they consider themselves separated from daily life. ... They claim they are not emotional, that emotions do not participate in what they do and it's not true. – Humberto Maturana (Lombardi 1996b)

What resonates most about my interactions with Brun at the 1992 ASC conference was his *being love* while in conflict with others. What a performance of peace as a need.

Herbert Brün the performer.

Herbert was a performer, composing himself, through his languaging, as a praxis for doing cybernetics. Cybernetics is enacted in doing cybernetics.

We today, behave as if we could not understand the future, although it is the only thing we should understand. The past is past, the present happens anyway and understanding and agreement has to be given to false statements. – Herbert Brün 1994c

A False statement, something that is not the case though I desire it be the case, so I language as if it were the case. False statements emerge from articulated desires.

## Designing

If something happens which you definitely don't want to happen  
and all you can do about it is say that it is a perfect functioning of what? ...  
Everything but cybernetics is success oriented, cybernetics is resource oriented. ...  
If you don't have such problems you don't need cybernetics. ... If perfection is your goal you  
don't need cybernetics. If fluctuation control, how one thing flows into another without having to  
need causality or violence. How things do flow into one another. Transformations it's called,  
mutations, they're words. How does that happen? You need cybernetics. – Herbert Brun 1993

I want a new society. I don't like the society I am presently living. It's not my choice, it's a  
given. However, *how* I live my relations with others is my choice.

I makes the choice.

In an attempt to fulfill my longing for living relations I want, I articulate a society I desire.

The Desires Exercise, one method for articulating desires. (M. Brün 1985)

Desires Exercise simply put:

Think about what you want changed in a society that seems impossible to change.  
Make that statement into something you know you want to be the case, a desire.  
Make that desire statement into a false statement as if it has taken place.  
Ask lots of questions about the false statement you want to be true.  
Act in any way possible to make that false statement a true one.

I was first introduced to the Desires Exercise in 1993 at the School for Designing a  
Society. Below is my first effort at a Desires Statement, which in moments, continues to  
orient my thinking and performance of daily life. I'm still figuring it out. Inputs are like  
that.

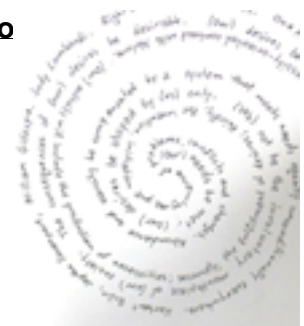
Right or Wrong our Desires  
Herbert Brün, J. Davenport, W. Gillespie, J. Lombardi, 1993.

**video**

While it is not the case, I desire that the following be the case:

(We) not be the involuntary mouthpiece of (our) society.  
The consequence of (our) desires be desirable.  
(Our) desires be shaped by (us) only.  
(Our) desires be realized.  
(Our) needs be met.

So,



(We) will make a necessity-oriented contract with Nature.  
(Our) activity will include: the production of necessities;  
the fulfillment of desires; the invention, initiation, and  
performance of problems, conflicts and changes.

Abundance and scarcity will be accompanied by a system that meets needs equally  
unconditionally everywhere.

False Statement: I live a society that is constantly changing in ways I desire.

So, how do I make this statement true? What do I want to conserve? What do I want to  
negate?

A system can only be destroyed by denying  
the relations that constitute it. – Humberto Maturana 1986

How can I perform in ways that reflect a micro/macro society I desire?

## Performing

Sometimes a slight change in language use can bring about a treasure of  
thoughts that otherwise would never come to speech. Among them may  
be the sentence we are missing and longing for. – Herbert Brun 1994a

The nucleus of a society, a point of departure for generating a society I desire when  
linguaging my desires in a current society.

When embracing the concept “everything said is said *by* an observer *to* an observer,” a  
triadic relationship between observers, their language and a society emerges.

Triadic relations,

You cannot say who was first and you cannot say who was last.  
You *need* all three in order to have all three. – Heinz von Foerster 1979

Performance, when linguaging with awareness of one’s likes, dislikes, needs and  
desires.

In order to retard the decay of curiosity, the composer stipulates certain  
configurations he calls ‘new systems’. These are unexplored systems  
(with other words, in a kind of disorder or chaos) and proceeds  
to systematically order it by exploring it and documenting  
the traces left by this exploratory process.  
– Herbert Brün (Smith 1975)

## Summary

Participants generate distinctions, create forms, compose formulations and design new  
systems.

Possible formulations for composing and designing new systems, a society, I desires:

- Grasp an idea, place it in a context in which its repetition is more than mere redundancy – insistence.
- Establish connections, attend to languaging, articulate constraints, generate possibilities.
- Articulate triadic relations, generate formulations, perform established connections.
- Retard the decay of desires, create asynchronicity, act in love – insist.

What do I want to conserve? Memories of Herbert Brün, even though they're partial. Herbert Brün, the best teacher I ever had.

### **Final Note**

Brun's desire and techniques for anticommutating remind me that we cannot solve our current problems with the same ways of thinking and languaging that oriented their emergence. We need – yes need – unique ideas, concepts, and formulations that are, by design, initially unfamiliar and thus easily dismissed. So be aware and please consider this report a reflection of that dilemma. And – let's have conversations.

## References

Bateson, G. (1979), *Mind and Nature: A Necessary Unity*, E.P. Dutton, New York, NY. p. 99.

Bateson, M. C. (2014), "Cybernetics in the Future", available at: <https://www.youtube.com/watch?v=nXQraugWbjQ> (accessed 1 April 2019)

Brün, H. (1977), "Presentation to Music Theory 405 Seminar", available at: <https://sites.evergreen.edu/arunchandra/wp-content/uploads/sites/395/2018/05/brunLecture1977.pdf> (accessed 1 April 2019).

Brün, H.(1982), "On Floating Hierarchies", American Society for Cybernetics (ASC) Conference, available at: <http://ada.evergreen.edu/~arunc/texts/brun/pdf/brunFH.pdf> (accessed 1 April 2019).

Brün, H. (1986a), *my words and where I want them*, #7, Princelet Editions, London.

Brün, H. and Maturana, H. (1992), "Reality: The Search for Objectivity, or the Quest for a Compelling Argument, An In-depth Exploration of the Cybernetics of Herbert Brün and Humberto Maturana", pre-conference booklet, R. Donaldson, (Ed.), American Society for Cybernetics (ASC) Conference, Seabeck, Washington.

Brün, H. (1993), "Why Cybernetics? Or, when you might need cybernetics", available at: <https://www.youtube.com/watch?v=TTf1OysqCV4> (accessed 1 April 2019)

Brün, H. (1994a), "Herbert Brun on social Transformations 1994", available at: <https://www.youtube.com/watch?v=2qa6gRmN3IE> start at: 5:30 min. (accessed 1 April 2019).

Brün, H. (1994b), "Herbert Brun on Floating Hierarchies", available at: <https://www.youtube.com/watch?v=TxDQf6CpKcU&t=6s> (accessed 1 April 2019).

Brün, H. (1994c), "Turning our Desires into False Statements", available at: [http://www.jlombardi.net/media/brun\\_FS\\_94.mp4](http://www.jlombardi.net/media/brun_FS_94.mp4) (accessed 1 April 2019).

Brün, H. (1995a), "Useful FUNDAMENTALS when I want to know what I am thinking about", available at: [https://www.youtube.com/watch?v=9E\\_Cn9-d86g](https://www.youtube.com/watch?v=9E_Cn9-d86g) start at: 10:55 min. (accessed 17 April 2019).

Brün, H. (1995b), "Useful FUNDAMENTALS when I want to know what I am thinking about", available at: [https://www.youtube.com/watch?v=9E\\_Cn9-d86g](https://www.youtube.com/watch?v=9E_Cn9-d86g) start at: 7:15 min. (accessed 17 April 2019).

Brün, H. (2003), *Sighs in Disguise*, #159, Non Sequitur Press, Champaign, IL.

Brün, H. (2004a), "Appendix B: Declarations", in Chandra, A. (Ed.), *When music resists meaning: the major writings of Herbert Brün*, Wesleyan University Press, Middletown, CT, p. 289.

Brün, H. (2004b), "Appendix B: Declarations", in Chandra, A. (Ed.), *When music resists meaning: the major writings of Herbert Brün*, Wesleyan University Press, Middletown, CT, p. 289.

Brün, H. (2004c), "Appendix B: Declarations", in Chandra, A. (Ed.), *When music resists meaning: the major writings of Herbert Brün*, Wesleyan University Press, Middletown, CT, p.

Brün, H. (2004d), "Drawing Distinctions Links Contradictions", in Chandra, A. (Ed.), *When music resists meaning: the major writings of Herbert Brün*, Wesleyan University Press, Middletown, CT, pp. 225-236.

Brün, H. (2004e), "Sentences Now Open Wide", in Chandra, A. (Ed.), *When music resists meaning: the major writings of Herbert Brün*, Wesleyan University Press, Middletown, CT, pp. 269-272.

Brün, H. (2004f), "Appendix B: Declarations", in Chandra, A. (Ed.), *When music resists meaning: the major writings of Herbert Brün*, Wesleyan University Press, Middletown, CT, p. 290.

Brün, M. (1985), *Designing Society: Marianne Brün and Respondents*, Princelet Editions, London, UK, available at: <http://ada.evergreen.edu/~arunc/texts/cybernetics/ds/ds.pdf> (accessed 1 April 2019).

Brün, M. (2004), "Appendix C: Paradigms and the Inertia of Language", in Chandra, A. (Ed.), *When music resists meaning: the major writings of Herbert Brün*, Wesleyan University Press, Middletown, CT, pp. 292-300.

Davis, A. (2011), "Angela Davis at Occupy Wall Street", available at: <https://www.youtube.com/watch?v=D7gdNptUWlc> (accessed 1 April 2019).

Donaldson, R. (1992), "Cybernetics and Human Knowing: One Possible Prolegomenon", *Cybernetics and Human Knowing*, Vol. 1 No. 2-3, pp. 5-7, available at: [http://j lombardi.net/pdf/donaldson\\_cybernetics.pdf](http://j lombardi.net/pdf/donaldson_cybernetics.pdf) (accessed 1 April 2019).

Foerster, H. von (1978), "On Constructing Reality", in Preiser, W. (Ed.), *Environmental Design Research*, Dowden, Hutchinson & Ross, Stroudsburg, PA. available at: <http://pespmc1.vub.ac.be/books/Foerster-constructingreality.pdf> (accessed 1 April 2019).

Foerster, H. von (1979), "Cybernetics of Cybernetics", in Krippendorff, K. (Ed.), *Communication and control in society*, Gordon & Breach, New York, NY, pp. 5-8.

Foerster, H. von (1992), "Ethics and Second-Order Cybernetics", *Cybernetics and Human Knowing*, Vol. 1 No. 1, pp. 9-19.

Forsythe, K. (1989), "Metaphor and Metadomain: The Art and Science of Understanding", in Glanville, R, and Zeeuw, G. (Eds.) *Mutual Uses of Cybernetics and Science*, Amsterdam, pp. 13-18.



Glaserfeld, E. von (1984), "An introduction to radical constructivism", in Watzlawick, P. (Ed.), *The invented reality*, W. W. Norton, New York, NY, pp.17-40.

Glaserfeld, E. von (2001), "Constructing Communication", available at: <https://www.univie.ac.at/constructivism/papers/glaserfeld/glaserfeld01-interview.html> (accessed 1 April 2019).

Glaserfeld, E. von (2003a), "On Knowing and Heinz von Foerster", video presentation at Organizing Organizations, Variations on Three Imperatives by Heinz von Foerster, Vienna, Austria, available at: [https://www.youtube.com/watch?v=C7\\_1KfBbedU&t=757s](https://www.youtube.com/watch?v=C7_1KfBbedU&t=757s) (accessed 1 April 2019).

Glaserfeld, E. von (2003b), "A History of Cybernetics", available at: <https://www.youtube.com/watch?v=pm5u68t6kPI&t=405s> start at: 5:30 min. (accessed 1 April 2019).

Glaserfeld, E. von (2003c) "Adaptation, Assimilation, Accommodation", available at: <https://www.youtube.com/watch?v=LxTZTETSPQg> (accessed 1 April 2019).

Glaserfeld, E. von (2009), *PARTIAL MEMORIES, Sketches From an Improbable Life*, Imprint Academic, Exeter, UK.

Glaserfeld, E. von. (2010a) "Second-order Cybernetics and Radical Constructivism", available at: <https://www.youtube.com/watch?v=j6iTte9qngs&t=4s> (accessed 1 April 2019).

Glaserfeld, E. von. (2010b). "Chaos, Order, Experiential Realities and Intersubjectivity", available at: <https://www.youtube.com/watch?v=2MKrHXey8ak&t=741s> (accessed 1 April 2019).

Lombardi, J. (1996a), "Epilogue", *From what to when is not violence*, available at: [http://www.jlombardi.net/media/dissertation\\_excerpt8.mp4](http://www.jlombardi.net/media/dissertation_excerpt8.mp4) start at: 4:48 min. (accessed 1 April 2019).

Lombardi, J. (1996b) "Who is Science?", *From what to when is not violence*, available at: [http://www.jlombardi.net/media/dissertation\\_excerpt6.mp4](http://www.jlombardi.net/media/dissertation_excerpt6.mp4) start at: 3:30 min. (accessed April 2019).

Lombardi, J. (2007), "Peace is a Need – Passions Presentation", available at: [http://jlombardi.net/pdf/peaceisaneed\\_passions.pdf](http://jlombardi.net/pdf/peaceisaneed_passions.pdf). (accessed 1 April 2019).

Lombardi, J. (2011), "What's so Radical about Radical Cybernetics?", presented at the 19<sup>th</sup> International Congress on Personal Construct Psychology, Boston, MA. available at: [http://www.jlombardi.net/pdf/what\\_radical\\_rc.pdf](http://www.jlombardi.net/pdf/what_radical_rc.pdf) (accessed 1 April 2019).

Lombardi, J. (2015), "Conversation and Consensus, Designing Academic Conferences", *Constructivist Foundations Journal*, Vol. 11 No.1, p.79, available at: [http://www.jlombardi.net/pdf/lombardi\\_RFjournal2015.pdf](http://www.jlombardi.net/pdf/lombardi_RFjournal2015.pdf) (accessed 1 April 2019).

Maturana, H. R. (1974), "Cognitive Strategies", in Foster, H, von (Ed.), *Cybernetics of Cybernetics*, Biological Computer Lab Report No. 73-38, University of IL. Urbana, available at: <http://pespmc1.vub.ac.be/books/Matura-CognitiveStrategies.pdf> (accessed 1 April 2019).

Maturana, H. R. (1992a), "Structural Determined Entities", available at: <https://www.youtube.com/watch?v=HuR-An8IOCw> (accessed 1 April 2019).

Maturana, H. R. (1992b), "The Biology of Love", available at: <https://www.youtube.com/watch?v=OCp1JdEmeZc> (accessed 1 April 2019).

Maturana, H. R. (1992c), "Love, Language e the social", available at: <https://www.youtube.com/watch?v=PRJUkV-7A-w> (accessed 1 April 2019).

Müller, A. (2010), "What does it mean to be a inter/meta/transdisciplinary subject?", presentation at the American Society for Cybernetics Conference, available at: <https://www.youtube.com/watch?v=IMqqQ1J66yg&t=1s> start at: 2:00min. (accessed 1 April 2019).

Richards, L. (2009a), "Cybernetics: Definitions and Descriptions", in *Craft and Constraint, Clocks and Conversation*, p.101, available at: [https://www.academia.edu/3430858/Craft\\_and\\_Constraint\\_Clocks\\_and\\_Conversation](https://www.academia.edu/3430858/Craft_and_Constraint_Clocks_and_Conversation)

Richards, L. (2009b), "Appendix: Asynchronicity in Conversation", in *Craft and Constraint, Clocks and Conversation*, p.68.

Richards, L. (2010a), "One Possible Formula for Designing social Transformations", available at: <https://www.youtube.com/watch?v=pU3iS3ZVU2s> start at: 1: min. (accessed 1 April 2019).

Richards L. (2010b), "The anticommunication imperative", *Cybernetics and Human Knowing* Vol. 7 No.1-2, pp. 11-24.

Smith, S. (1975), "Interview, A Portrait of Herbert Brün", *Perspectives in New Music*, Vol. 17 No. 2, pp. 56-75, available at: <http://www.herbertbrun.org/smith.html> (accessed 1 April 2019).

Stein, G. (1935), *Lectures in America*, Random House, New York, NY.