

10 The Collaborative Process of Re-creation: Anne La Berge's *Brokenheart* (2007) for Performers, Live Electronics, and Video

Pamela Madsen

Brokenheart (2007) is a work by Anne La Berge for computer-controlled electronics, acoustic instruments using small loudspeakers, and live video. The resultant work exists in multiple realizations of guided improvisations created through a process of collaboration. It was first commissioned and performed in 2007 by the LOOS ensemble, re-created in 2009 in collaboration with Jane Rigler (flutist/electronics), Pamela Madsen (pianist/electronics), and Anne La Berge (typist/electronics), and recorded in 2011 by Cor Fuhler (piano/electronics) and Anne La Berge (flute/electronics) for La Berge's CD *Speak*. The generations of the work resulted in multiple evolving perspectives of interpretation of the concept of "broken heart" syndrome through the use of guided improvisation, text, and electronics. What is unique about La Berge's work is her generosity in sharing her creative process and the openness to diverse perspectives during her engagement in the moment. I will discuss La Berge's collaborative process of re-creation, her aesthetic of guided improvisation and electronics, and the subsequent multiple generations of the work and their divergent results.

About Anne La Berge

Anne La Berge's passion for the extremes in both composed and improvised music has led her to the fringes of storytelling and sound art for sources of musical inspiration. Bob Gilmore asserts, in the booklet of La Berge's CD *Speak*: "Her performances bring together the elements on which her international reputation is based: a ferocious and far-reaching virtuosity, a penchant for improvising delicately spun microtonal textures and melodies, and her wholly unique array of powerfully percussive flute effects, all combined with electronic processing" (Gilmore 2011).

La Berge was born in the United States and moved to Amsterdam in 1989. Her early compositions (collected on her first solo CD, *blow*) pioneered new approaches to the flute—percussive, noise-filled, microtonal, sometimes aggressively physical

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performances. She worked with new lip techniques, breathing, and use of the microphone, developing the amplified flute as an instrument in its own right. She has worked with interactive computer systems and digital processing techniques in live performance, using programs such as Max, LiSa, Imagine, and the Clavia MicroModular synthesizer (on the CD *United Noise Toys* with Gert-Jan Prins). Currently, La Berge primarily uses the Kyma Sound Design System. In 1999, together with drummer Steve Heather and synthesizer player Cor Fuhler, she founded Kraakgeluiden, an improvisation series based in Amsterdam, exploring combinations of acoustic instruments, electronic instruments, and computers, and using real-time interactive performance systems. La Berge's own music has evolved in parallel, and the flute has become only one element in a sound world that includes computer samples and the use of spoken text (La Berge n.d.).

La Berge's Aesthetic of Guided Improvisation, Electronics, and Text

To understand how to approach La Berge's work *Brokenheart*, we first must understand her aesthetic of guided improvisation, use of electronics, and how text is involved in the creation and generation of the performance. La Berge creates compositions that work with a flexible combination of imposed musical situations and electronics, where performer/improvisers are an integrated part of the music-making process, dividing her time between "conjuring up concepts, structures and scores and showing up on stage to play" and thriving on a precarious balance between creating and performing (La Berge 2010).

In her article "On Improvising," La Berge discusses her perspectives as a composer/performer and gives further insight into her own unique aesthetic of hearing and playing. Her approach is investigative, often scientific, and curious, exploring sound as an acoustic phenomenon to be discovered and expanded. She explains, "We live in a field of ears. It is known that the little hairs in our ears, the cilia, respond to sound by vibrating in patterns that undergo various psychoacoustic interpretations in our brains" (La Berge 2006).

La Berge's studied perspective of interpretation, respect for the composer's intentions, and mastery of skills give us clues as to how she also composes and intends her guided improvisation to be heard within the context of their codes and intended performance practice. As she put it, "Full use of performance practice resembles improvisation. Creative use of performance practice makes room for imagination, invention, and taste" (La Berge 2006).

La Berge's aesthetic of improvisation has often been one of rebellion, as an outsider or outlier, and to create improvisations that don't quite fit. As she describes it, "I

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love to improvise material in places where it might not fit. That means playing very softly, very loudly, very brutally, very simply, very virtuosically, very naively, so that the sounds have their own clear musical identity. It is then up to the sounds to find out if they will be artistically useful or even magical in the moment. In some cases, they find themselves as a driving force in a larger structure. In other cases, they live and die in a breath" (La Berge 2006).

The basis of her compositional and improvisational language is intimately linked to her playing and the performance history of the flute as a classical instrument:

I play the flute. My flute is a tube with a series of holes sized and placed in a highly sophisticated and innovative way (give or take some instinctual departures). When I play my flute, I blow and occasionally suck through my body's tubes—that is, my lungs, my windpipe, my nose, my mouth, my lips. While playing my flute I love to imagine those little cilia vibrating away in that enormous field of ears, responding to whatever I can get my flesh and metal tubes to do. When I start to sense that those ears are not getting enough information, enough articulation, enough clarity, enough ideas, I make up new sonorities, new envelopes, new timings, new juxtapositions to keep my sonic language fresh and keep those ears alert. (La Berge 2006)

Her perspective as a performer/composer developed from her mastery of her instrument and her performance of composed music. In her words, "When I play composed music, I try to support the ideas, the fantasies and the structures of the composer. Playing composed music takes a lot of trust. It is a three-way trust between composer, performer(s) and the field of ears" (La Berge 2006).

In her mastery of composers' intentions, she reflects on the need for an understanding of performance practice—and the tacit codes surrounding it: "I do my best to trust composers' intentions and I like to learn music so that I can attempt to replicate it from performance to performance. There is no perfect performance although the ambition to create one often comes with composed music. I suppose perfection is something that accompanies notated music. I once thought that ink was holy. As performer, I feel responsible for not only understanding composed music but for making use of the tacit codes surrounding it. That is, performance practice" (La Berge 2006).

For her insights on improvisation, La Berge explains her understanding of past music and how she hears new music: "When I improvise, I mess with orchestration, with style, with timbre. I prefer to experiment with sounds, rhythms, shapes that may or may not work. I like to stumble on new places by establishing familiar territory and getting lost. If I go to a place I've been before, I pretend that the field of ears has not yet tasted these sounds, this music, at least not quite like this before. I work to renovate and transform my fantasies about my flute, my body, my wind, the field of ears, the millions of cilia per millimeter each ear hosts" (La Berge 2006).

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La Berge developed her improvisational approach in various ensembles, exploring extended techniques as a researcher for other composers. She also collaborated in improvisational performances with composer/flutist John Fonville and composer/guitarist/singer David Damm. Through her work as a performer/improviser, she evolved to become a composer/improviser. She explains, “As a result of those collaborations with other musicians (and dancers), documenting my work became a necessity. It was at that point that someone called me a composer. I saw it as freezing improvisations on paper” (La Berge 2010).

These “frozen improvisations” became a system of notation to document the work that La Berge was creating in performance. As she asserts, “We had no desktop computers in those days. Notation was ink on the page. Looking back at those early documents I remember a couple of obstacles that took years to solve. One was finding a notation for the extended techniques, some of which were unique to my playing, and the other was how to construct a work where anarchy and control had equal footing. In other words, how could I compose music that sounded like me? Or even more accurately, how could I enable a performance environment where everyone involved sounded like an organism composed of separate musical personalities?” (La Berge 2010).

These concerns for composing a music that sounded like an improvisation, that captured the essence of a real-time realization, are not new, but La Berge was, and is, at the forefront of attempting the realizations of these processes, still striving for a way to solve issues of communication and collaboration. In her words, “Give me until 2050 and I think I may get close enough to be satisfied. Improvisation, experiment, experience, technology, colleagues and failures have all been my saving graces. Regardless of the obstacles, I continue to compose and perform because I need to and I simply can’t and/or won’t give up one or the other. Why not have it all? Or in this case, why not have a portion of both to get on with making art?” (La Berge 2010).

Rebekah Wilson summarizes the unique, powerful nature of La Berge as performer and improviser/composer, and her use of technology, in her review of La Berge’s work for Institut für Medienarchäologie:

The powerful nature of Anne La Berge isn’t just that she is a virtuoso performer, or that she embraces technology: it’s that she visibly has fun with it. She mocks and circles around the question, her scientist-daughter mind so sharp that you know she is fully aware of the audience and its perceptions and yet she is not so self-absorbed that she misses being in the moment. Her music and performances do not suffer from cynicism or that kind of post-modern criticism that chides itself from being joyful. Her music is engaging and infectious. As a listener you marvel at her technique and want to know if her stories are true and how she is inspired. As a composer/performer you want to be on stage with her. (Wilson 2015)

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Anne La Berge on Intermedia Composition: Image, Music, Text, and Technology

La Berge also engages in intermedia: using image, music, and text to approach a social or political topic in her work. Her real-time use of intermedia allows her to embed social and political dimensions within the metanarrative of the composition/improvisation. Her primary interest in creating intermedia digital scores is to take her audience “through personal narratives where they are given the opportunity to learn about science, history, social theories, and psychology” and to experience an opportunity for “learning on an emotional level.” She also has a playful side in her scores, saying, “In my pieces I like to inject some confusion, so people have to redirect their attention and reassemble either their own story, or come to terms with elements of the story that I haven’t led them through” (Vear 2019).

She aims to have the audience “fit things together” for themselves, and, in doing so, she invites people’s imagination into the rich mediated stories she presents through abstract, visceral sound and the complex semiotics of language (Vear 2019). Within the flow of musicking, creating new music in the moment, La Berge considered the behavior of the digital electronic elements (sound, image, algorithms, and the network of interconnections) as if they were the “other living being making aesthetic and structural decisions throughout the performance” (Vear 2019). She said that throughout a performance she stays “hyper-alert to their activities and actions,” as they help determine her decisions to “function as either support or as steering member of the ensemble.” This changed the nature of her role and her perception of the role of the digital elements. At times, she felt that she functioned as a “side-person” and at others the “front-person in an improvising band” in which the electronic digital elements were the other “members” of the band. Overall, she perceived her role as “co-architect, co-composer, co-designer, co-poet,” in which her “brain and body were active as were the digital others.” To facilitate this, La Berge imagined that “we are all in it together, the digits and me” (Vear 2019).

The interplay generated through the digital score in the flow of musicking creates a work that feels like you are “performing with an improvisation ensemble” but also that it clearly defines “strict aesthetic boundaries.” The presence of the generative functions made her feel like she was “playing a score with rules” and that the evocation of its moment-to-moment decisions called on her to “interact, steer and follow all the media.” Within the flow, she feels that each medium had the opportunity to be playful, dominant, and fluid, depending on the here-and-now combinations of “pre-sets, juxtapositions of sound and image and what the data flow was doing.” Although she chose a minimal approach in her realization of the work, it did entail jumping between

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somewhat athletic changes and pauses to give the audience a mazelike path to follow while still enjoying her own performance (Vear 2019).

Discussion and Analysis of *Brokenheart* (2007)

For the discussion and analysis of *Brokenheart*, I will consider the specific elements that influence La Berge's process of realizing the work:

1. Creation of work: inspiration based on scientific exploration and text
2. Technology: specific systems used
3. Guided improvisation: strategies for realization
4. Discussion of multiple generations of *Brokenheart*

Creation of Work: Inspiration

For La Berge, her works involve careful research, which she uses as material to generate the work:

I construct most of my works after a lengthy period of research on social, psychological, political, and/or scientific issues that the piece will be based on and then I sort out what the audience needs to see and hear in order to grasp the artistic messages I am focused on. The mixed medias I work with in this stage are text, sound, and image. The usual way for me to create a piece using text is to research the subject(s) that have inspired the piece and collect facts, quotes, and my own responses to what I have read and then create a reduced poetry. My process is gathering and harvesting information followed by a ruthless killing of my darlings. (Madsen 2019a)

As inspirational material for *Brokenheart*, La Berge used information on broken heart syndrome. Broken heart syndrome is a condition in which intense emotional or physical stress can cause rapid and severe heart muscle weakness. This condition can occur following a variety of emotional stressors such as grief, fear, extreme anger, and surprise. It can also occur following physical stress such as stroke, seizure, difficulty breathing, or significant bleeding. It primarily affects women and occurs most frequently in middle-aged or elderly women, with the average age about 60. While it can also occur in young women and even in men, the vast majority of the patients are postmenopausal women. The exact reason for this is unknown.

The heart muscle is overwhelmed by a massive amount of adrenaline that is suddenly produced in response to stress. The precise way in which adrenaline affects the heart is unknown. One of the main features of this syndrome is that the heart is only weakened for a brief period, and there tends to be no permanent or long-term damage.

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Broken heart syndrome can easily be mistaken for a heart attack. Most of the people with broken heart syndrome appear to have fairly normal coronary arteries with no severe blockages or clots. The heart cells of people with broken heart syndrome are “stunned” but not killed, as they are in a heart attack. This stunning heals very quickly, often within just a few days. Even though a person with broken heart syndrome can have severe heart muscle weakness, the heart completely recovers within a couple of weeks in most cases, and there is no permanent damage.

First described medically in 1991 by Japanese doctors, broken heart syndrome was originally called takotsubo cardiomyopathy. When doctors take images of a person experiencing broken heart syndrome, part of his or her heart resembles the shape of a Takotsubo pot, used by Japanese fishermen to capture octopuses. La Berge used these medical descriptions and history of this condition as inspiration for the text she wrote to be recited for the work and as the elements that guided the creation of the score, technology, and choices to be made by performers in their approaches to improvisation (La Berge 2007).

La Berge’s text about broken heart syndrome is used for the chat material to be inserted in the live video. This text needs to be typed in real time during the performance of *Brokenheart*. The choice of timing, screen position, font, and words is left up to the “typing” performer. For La Berge, the use of text is integral to her process of guided improvisation:

Text brings us into a special cognitive, psychological space that is different than when we listen to nontext sounds or music. We create meanings that are deeply personal, and our emotions are touched differently when text and music are combined.... In my work, I use a semi-narrative use of text that can range from abstract poetry to lists of facts. The text is meant to inspire improvisers to pay attention to their music making in a different way than when they only relate via sound. It is also meant to inspire the audience to listen and receive the meanings and sounds I have created in their own ways. I find using text is a way to shuffle improvisers’ musical habits and listeners’ expectations.... I use text to startle people, to *jump-start* them out of their habits and truly experiment. (Madsen 2019a)

The text for *Brokenheart* is a set of poetic and narrative texts that La Berge made up as she delved into the science and personal accounts of broken heart syndrome. The texts relate specifically to each individual section, where video, sound, and live improvisations create a total experience. This is the text created by La Berge from which the “typing” performer chooses:

attack

The pain was somehow completely different than the sorrow.

But it still felt like some kind of attack.

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although I couldn't describe what or where the pain actually was. But I remember it as an overwhelming attack from the inside out. I just wanted to find a way to ease away from all of it.

blood

There was an old and deep trust that my heart would get through it.

Or at least that my blood would find its way back to where it wanted to be. it moved with quiet power.—constant blood stopped its twisted route There inside me where belief was supposed to be safe.

breath

Something in my heart went very very wrong

but nothing in my breath has changed.

another way to solve it was not to have loved at all.

chest

found its way into the darkest corners of my chest—there in the back of my chest Too scary.

Can't even put it into words.

black noises throbs strange loud gushes—dagger tingles and strange twinges

extreme

flash moments and long spans of extreme—surge of extreme sharp internal tears

muscle

such a faithful muscle waiting to be heard

flailing muscle that claimed to be more than just a bodypart never asked why they hid there in the corner

mystery

the mystery kept trying to sneak into my heart hated the mystery because it was so dark

screaming mystery would find silence

nostalgia

had an old wish that floated up—hope squirting in all directions Sometimes after it happened my heart seemed better. Time could not find its way back into power. There was a period when only simple pangs bounced against it.

stress

never quite sad enough to fully break—pushing the sadness from room to room

stun—(no typing)

ventricle

A silly shaped heart with too many beats.

Named after a super old Japanese pot.

It generally hits the left side when it finds a heart. only the favorite ventricle gets so weird

Takotsubo is the name of the old pot

(La Berge 2007)

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Technology of *Brokenheart*

Brokenheart uses computer-controlled electronics, acoustic instruments using small loudspeakers on and in their instruments, and live video. The audio samples played by the computer are recordings of instruments built by Wessel Westerveld, recordings of Anne La Berge reading text, and sine tones generated by the Clavia Nord synthesizer.

La Berge's technology is intentionally direct and simple so that it can be easily duplicated by others:

To perform the work one needs the audio samples and technology to synthesize sine tones. The audio needs to be played through small and robust speakers that are wired where the performers can put them in or on their instruments and relocate them. The video needs to have the heart video clips with options to process them similar to the way the Max patch does. And finally, the live typing of the text would have to be projected preferably on the same screen as the heart videos. At this time, in 2019, this could be done in Ableton Live using Processing for the video. Or in Supercollider with another new video program. Currently, in 2019, there are many options, and I anticipate many more will appear as technology becomes more and more advanced. (Madsen 2019a)

La Berge uses technology as a way to free the performer from previous conceptions about work and provide another way of interacting. She explains, "I have also found that using technology to guide performers is less confronting and has less historical baggage than when using a conductor and/or a human cueing system. Using technology and algorithms to guide an improvisation gives the performers equal responsibility because they are all responding to the computer's random generation of instructions and sounds rather than waiting for and responding to another human" (Madsen 2019a).

The technology for the original version of *Brokenheart* consists of a Max patch, playing sections of sampled material. Each section contains samples that are played randomly with random envelopes, which gives the computer a somewhat structured improvisational role. Even though the volume of the samples is set for each section, the Max patch allows MIDI control to tweak the volumes of each sample during the performance. La Berge states, "Many of my pieces are in the form of a Max patch or Max app that informs the performers when and when not to play and suggests musical parameters to focus on. The cues that the Max patch gives can be either visual, aural, or both.... The advantage of using touch-sensitive devices is that the communication is two-way between the device and the main computer" (Madsen 2019a).

For each section, the acoustic performers are given specific instructions as to the material they should play, while the introduction and coda are roughly notated. Specifically, commenting on her use of technology in *Brokenheart*, La Berge notes that, "I am interested in using the computer as a third party, as another personality in the performance. The computer/typist in *Brokenheart* chooses which text to type and when to

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move on to another section in the piece. In each section, the Max patch plays samples and/or sine tones using a scaled random control of envelopes and volumes and also chooses which samples to turn on and off. One could even say that the computer is improvising the sound material within a strict set of rules” (Madsen 2019a).

For La Berge, engaging this particular form of improvisation and electronics provides a way to level the playing field and engage both performers who are professional acoustic improvisers and performers who are at home with technology. As she puts it,

Many professional acoustic improvisers are still shy about engaging with technology whether that is using hardware or software or just cueing sound files on a device. Performers who are at home with technology have often given up playing an acoustic instrument. What a pity that these parallel worlds are taking so much time to share the stage together! Much of my career has been invested in creating works where virtuosic electroacoustic performers can play with creative pleasure and abandon and where music technology nerds can do the same. And they can perform with one another, sharing the same musical space. (Madsen 2019a)

La Berge believes that prerecorded fixed media scores (such as playing along to a backing sound track) are confining, as in-the-moment decisions can’t be requested, whereas responsive and cooperative digital scores bring a “personality into the music similar to that of another performer.” As noted by La Berge, “The practice of responding to real-time changes in situations promotes an alertness and responsibility to make decisions that I find valuable to people” (Vear 2019). Her focus on digital scores that respond to the here and now of musicking is grounded in the ethos that wishes to create cooperative social partnerships between the machines, the media, and the musician.

La Berge’s narrative flows are equally open. She does not fix the trajectory of a digital score to go from “A through to Z.” Instead, she believes that the media and the score should evolve with each fresh interpretation of the score. According to La Berge, “I want to start a piece at A, and for it to finish on Z, but what it does in-between can go along many routes, or any number of different pathways.... [I]t can be a surprise, even to the programme itself” (Vear 2019).

Improvisation: Performer/Composer Choice

For *Brokenheart*, the order of the sections can be controlled by a computer player or can be chosen by the computer. In the latter case, the sections have been programmed to occur in random order, with each section lasting randomly between 30 seconds and three minutes. Performers can cancel the proposed sections or request new sections. Each performer is given one or two small Monacor loudspeakers. The audio played by the computer is played exclusively through these speakers, with each player having a unique speaker part. They are required to interact with the audio coming from their

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individual speakers, using the audio and the physical vibrations of the speakers to help generate and filter sounds using their own instruments. For example, low frequencies set the speakers in quite a dramatic motion. These “vibrating” speakers can be used inside the piano to generate sound from the piano strings and on the snare drum to make the drum “rumble.” The audio coming from the speaker placed inside the tenor saxophone can be filtered by using different combinations of fingerings and playing different notes.

As part of the live performance, there is also video material of hearts, with one performer typing text as chat material that is inserted into the live video. The choice of timing, screen position, font, and words is left up to the “typing” performer. The random sample playing gives the computer a somewhat structured improvisational role in each section. Even though the volume of the samples is set for each section, the Max patch allows MIDI control to tweak the volumes of each sample during the performance (La Berge 2007).

For each section, the acoustic performers are given specific instructions as to the material they should play, with the introduction and coda materials notated. However, *Brokenheart* can also evolve to be played as a free improvisation once the performers become familiar with the sections, the samples, and the text. *Brokenheart* can last any length of time. After some experimenting, La Berge indicates that performers will find a length that is appropriate for them and the material and find different lengths that are fitting for different performance situations (La Berge 2007).

La Berge discussed her process of constructing her guided improvisation—what parameters are fixed and what are free, and how this differs in each performance, specifically of *Brokenheart*:

The fixed parameters in the score or in the materials are different for each piece. Audio files, samples, and images are usually played using Max, where I can set up weighted random orders of start and stop and then use scaled random envelopes, volumes, filters, EQs, and other forms of audio processing. The compositions have predetermined sections that are ordered to support a narrative or a seminarrative function. I also like to structure pieces where beginnings and endings are set and the order of the other structures is random. That way, the narrative can take different paths from performance to performance while still supporting the meaning and the musical content of the piece. (Madsen 2019a)

Specifically, stopping and listening is a requirement of La Berge’s works in guided improvisation, as she explains:

My guided improvisation pieces require performers to periodically stop playing and listen to the evolution of the piece they are part of. I also encourage them to play their instruments more freely than from when they would be reading a notated score. That way surprises and

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unexpected juxtapositions of material are built into the piece. Some pieces allow the performers to control the structure, such as controlling when to move on to another section; give yes or no responses to parameter and timing issues; vote on a question; or control the volume of a sound. Stop and listen! What I've found when I work with groups is that improvisers are waiting for their next chance to play rather than listening for how they could contribute to the real-time composition that is unfolding. To strategize how they could steer it further or drive an unexpected change is key in my music. (Madsen 2019a)

Multiple Generations of *Brokenheart*

Currently, there exist three different versions of *Brokenheart* that work with various instrumental settings. Version 1 was originally for Peter van Bergen (saxophone), Gerard Bouwhuis (piano), and Johan Faber (drums). Version 2 was originally for Peter van Bergen (tenor saxophone) solo. Version 3 is for one to three players. All versions are for a computer running a Max patch and the performer(s) playing a guided improvisation. This work can be played by any small improvising ensemble. For the purpose of this chapter, I will discuss the three versions performed and recorded by specific ensembles: version 1, the original version for the LOOS Ensemble (2007); version 2, the recorded solo version for pianist Cor Fuhler (piano/electronics) and Anne La Berge (electronics), which is available on Anne La Berge's CD *Speak*; and version 3, for three players, as realized by Jane Rigler, Pamela Madsen, and Anne La Berge (2009). I will briefly introduce the two versions by the LOOS Ensemble and by Cor Fuhler and Anne La Berge. I will discuss in detail the third version of *Brokenheart*, the one I am most familiar with since I performed this work with Anne La Berge and Jane Rigler. According to La Berge, each of these different versions strives to "create musical situations that change, either dramatically or at unpredictable moments in time. I am interested in giving music extreme lengths, short or long, and extreme sonic expression, sometimes horribly rough and other times sublime." She says she is "less interested in creating logical and formal transitions when creating a piece." Rather, she enjoys "slamming and juxtaposing contrasting materials and seeing what the improvisers and the audience do to make transitions." This results in music that is created out of "not knowing what will happen" and can be very exciting for both the musicians and the audience (Madsen 2019a).

Version 1: LOOS Ensemble Performance of *Brokenheart* (2007), a Guided Improvisation by Anne La Berge The timeline and score created by the LOOS Ensemble provide an example of how a guided improvisation of this work would proceed with a fixed order, where the work is given section names and specific guidelines for performers. The specific performers in the LOOS Ensemble for this performance are Peter van Bergen (composer, clarinet, and saxophone), Johan Faber (percussion), and Gerard Bouwhuis (piano), with Anne La Berge cueing computer sounds and guiding the improvisation.

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Performers in the LOOS Ensemble worked together to create a specific plan and strategy for working together in real time based directly on the unfolding sections of the text. This realization is the most structured in that the timings and relative sound material were predetermined to create a specific guided trajectory of form in time.

LOOS Ensemble timeline/score

- 1 **attack** (computer plays machine sounds; Anne La Berge, computer)—00:00–01:30.
intro—play notated material—develop material *ff*—make transition to blood
- 2 **blood** (computer plays sine tones)—01:30–03:00 Gerard (piano)—ebow inside piano.
Johan (percussion)—bowed cymbals evolving into solo material. Peter (saxophone/
clarinet)—*ppp* airy long tones—3 sec play—3 sec rest
- 3 **breath** (computer plays very soft sine tones) 03:00–04:00 Johan's (percussion) solo
evolves into low rhythms—*p* to *f*
- 4 **chest** (computer plays grinding sounds) 04:00–06:00 Gerard (piano)—sparse rhyth-
mically driven clusters—*mf*, Johan (percussion)—continue low rhythms—*mf*—*f*,
Peter (saxophone/clarinet)—abstract pitch material on long tones w/sines—*mf*—*f*
- 5 **extreme** (computer plays clicks) 06:00–08:00—Gerard (piano)—dampen strings—
prestissimo ppp with accents, Johan (percussion) —knitting needles—*prestissimo ppp*
with accents, Peter (saxophone/clarinet)—*prestissimo ppp* with accents
- 6 **muscle** (computer plays low sines which vibrate the speakers) 08:00–10:00 Gerard
(piano)—use the speaker on your instrument, Johan (percussion)—use the speaker on
your instruments, Peter (saxophone, clarinet)—solo will continue into next section
- 7 **mystery** (computer plays text and only sine tones in saxophone) —10:00–12:00
Peter (saxophone, clarinet) solo—taking advantage of the filtering possibilities of
the saxophone
- 8 **nostalgia** (computer plays text and sine tones)—12:00–13:30 Gerard (piano)—
solo—*mp*, Johan (percussion) —soft articulations—only brushes—5 sec play—5 sec
rest—*p* Peter (saxophone/clarinet)—soft squeaks that develop later into multiphonics—*p*
- 9 **stress** (computer plays text and sounds)—13:30–14:00 Gerard (piano)—still play-
ing solo, Johan (percussion)—noisy paper or other soft objects—interrupt Gerard
(piano)—*mf*, Peter (saxophone, clarinet)—multiphonics—interrupt Gerard (piano)—*mf*
- 10 **stun** (computer plays no samples) 14:00–15:00 LOOS ensemble solo that evolves
into sustained clusters
- 11 **ventricle** (computer plays combinations of various machine sounds) 15:00–15:30
sustained clusters using the rhythms of the coda notation—Peter (saxophone, clari-
net) cues end. (La Berge 2009a)

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Version 2: Recording of *Brokenheart* for Anne La Berge CD *Speak* (2011) The second version of this work is for solo piano/electronics with electronics and flute. The recording of this work by Cor Fuhler (piano/electronics) and Anne La Berge (flute/electronics) is available on Anne La Berge's CD *Speak*. For this work, the spoken voice of La Berge reading text of a poem about *Brokenheart* provides structure and clarity to the guided improvisation performed by Cor Fuhler. According to the liner notes, a performance of this work will normally involve computer-controlled electronics, any small ensemble of improvising acoustic instrumentalists using small loudspeakers on and in their instruments, and live video. As with all the works recorded on this CD, any two realizations might vary considerably—although not totally—from each other, and what we hear here is only one, albeit highly polished, studio version. For this work, much of the instrumental material in this recording was improvised by La Berge's longtime collaborator Cor Fuhler on the inside of a piano. The starting point for his version of the piece was based on a response to the text for the phenomenon that doctors call "broken heart syndrome," a condition in which intense emotional or physical stress can cause rapid and severe heart muscle weakness similar to that experienced in a heart attack but not life-threatening. In this version of *Brokenheart*, the computer patch played a random selection from a bank of samples (with random "envelopes" that cut and shape the sounds in unpredictable ways). The samples include prerecordings of instruments built by Wessel Westerveld, recordings of La Berge reading a text describing broken heart syndrome, and sine tones generated by a Clavia Nord synthesizer. The small speakers were used almost as performers in their own right, and the musicians interacted with them (Gilmore 2011).

Version 3: Performance of *Brokenheart* (2009b) by Jane Rigler, Pamela Madsen, and Anne La Berge *Brokenheart* was performed as a version for instruments, electronics (loudspeakers), and video, for a trio consisting of Jane Rigler as flutist, myself as pianist, and Anne La Berge as typist/video performer during the Annual New Music Ensemble at California State University, Fullerton, in February 2009.

As a performer, I asked La Berge to suggest a work that I might be able to play with others as improviser and pianist. As a composer, pianist, and improviser, I had recently developed peripheral neuropathy in my hands and was looking for pieces that could reactivate my sense of touch. She suggested her work *Brokenheart* because as a player I would be able to hold the vibrating loudspeakers in my hands and feel the sensation of sounds being generated as I applied them to the internal mechanism of the strings on the piano. I also was very attracted to the meaning of the work and the physicality of its subject matter, broken heart syndrome, which I was to embody and interpret through my choices of materials in the act of improvisation.

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The work was created through a series of meetings, collaborations, improvisations, and discussions, where a version evolved over time. Rigler and I worked collaboratively with the text and the directions of the score, consciously discussing the text, creating responses to the guided improvisation, and devising a plan for triggered cues. We developed a map of a sound world within which we worked well, but we left the direction of where and when we would move along the way to the realization of the work in the present moment. La Berge fed us triggers of typed text randomly on the video screen, which we reacted to. She also fed samples of machines and sine tones that had weighted random processing to the loudspeakers we held in our hands. The result was an 11 min interactive guided improvisation that became a coherent piece we executed in performance.

For our 2009 performance of *Brokenheart*, our trio discussed the meaning of the texts, the possible triggers for cues of sounds, and how these might interact. We shared our process of creation freely, collaboratively making decisions about the most effective cues for specific texts and sound samples that were being sent. While we came to a consensus about what the work might be about and how we might approach this, we were also open to the spontaneity of the moment. The process of creating *Brokenheart* came from a concerted effort at precomposition, preperformance discussion on the part of all players. The end result was tied to conversation, dialogue, energy, and mutual respect for the performers/composers' process. During the performance of *Brokenheart* as a guided improvisation, the decision-making came from a careful balance between listening to yourself and the other players. Internal and external decision-making was in constant flux. For Rigler, this includes "being in the flow, recalling/storing phrases heard/played; spontaneous decision-making (the critical, yet playful game of fighting personal "judgments"); and a constant awareness of your presence with others (i.e., audience, players); and letting go" (Madsen 2019b).

The electronics were decided by La Berge: sounds fed into loudspeakers that we could use to distort or amplify our instruments. These were not controlled by us as players but were sent to us randomly by La Berge as typist and cuer of electronics. For Rigler, as a flutist/improviser/composer, electronics are part of who she is as a musician, so there was no boundary between her instrument and the electronics. In her words, "We have become hybrid beings—we've become cyborgs. When I'm playing, the electronics are me, my voice and my body" (Madsen 2019b).

Rigler and I discussed our process of preparing for the performance of guided improvisation in *Brokenheart*. This work required skillfully thought-out, predetermined decisions in order for the spontaneity to manifest freely. Rigler explains:

I work on specific techniques in order to bring out the best aspects of the phrase or gesture.
I don't predetermine the time—but give myself options for the transitions between sound

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worlds, movements, or gestures. I love performing and creating in this way because I am fascinated with the process. We have a theme and a topic, but no conclusions, and maybe some grandiose ideas emerge along the way.... Guided improvisation compels creative artists to focus on the moment to allow for new connections. It allows us all as a community to give permission to explore new ideas. The guided improvisation is merely a map, or blueprint, to create opportunities for something unexpected to emerge. (Madsen 2019b)

We discussed the resultant work of our guided improvisation. In Rigler's view, "*Brokenheart* can have many outcomes—it could heal or create more brokenness. For this reason, I respect the process of the piece. It comes into being throughout time. It reiterates itself into many new meanings. The piece tells me how to begin, and the outcome is a channel for creative outlet, for us, the performers as well as the audience. The piece is like a living being, always on its way toward becoming. Maybe this work is still in its infancy, waiting to be constantly reborn" (Madsen 2019b). Rigler sees *Brokenheart* an object that is seeking a new life from life itself, and we as performers offer to give this piece a life form. A potential for the piece to become its own life form—a life after that will always exist. *Brokenheart* will always be there and exist as an impetus, a challenge for us to listen and create. Sound will always be there, whether we are there to do it or not. (Madsen 2019b)

This version of *Brokenheart* (2009) with La Berge, Rigler, and me was recorded during the performance and served as recorded material and cues for subsequent layers of new improvisational works. The resultant recording became the impetus for another series of works created in collaboration with my longtime collaborator video artist/poet Quintan Ana Wikswo. This work became a video installation for her cycle of work *Prophecy of Place: "On the Sofa a Vilnius"* (2011, Yeshiva Museum, New York City) using the backing track of the recorded improvisation. Subsequently, I composed another guided improvisation with a new layer of spoken text for voice, piano, and saxophone on top of the video installation, text to perform with the recorded audio, and Quintan Ana Wikswo's *Prophecy of Place* video in live performance. The result is an ever-evolving concept of guided improvisation, generously shared by La Berge as a sequence of layered improvisations stemming from the original concept of *Brokenheart*.

Ten years later, in 2019, I conducted phone interviews with La Berge and Rigler on our process of performance/realization of *Brokenheart* and the strategies for realization of this work involving extended techniques, technology, and improvisation. This discussion was essentially an extension of our process of creation—since it is in this discussion process and openness to collaboration that the work *Brokenheart* resides—in that moment of questioning and creation. The very process of unfolding questions and directions, the selection of words spoken and exchanged by both creator and performer, and the discussion about the content and choices made after the realization of a work became yet another part of the evolving work.

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Conclusions

La Berge's creative process, aesthetic of guided improvisation, and electronics informed the subsequent multiple generations, divergent results, and evolving perspectives of interpretation of the concept of broken heart syndrome. What is unique about La Berge's *Brokenheart* is the generous sharing of this work and the blurring of the boundaries of creator, composer, performer, and electronics. The work, in its various forms, exists each time, in its own time and unique perspective. La Berge and the collaborating performers of *Brokenheart* generously shared their creative processes without reservations or claims of ownership but rather forged new ground to create a porous process of generation in each new performance, with the use of technology as an integral member of the improvising ensemble. *Brokenheart* asks the performers to tell the story aesthetically, conceptually, emotionally, and musically in the ways that work for each specific performance situation. Technology became a kindred spirit that supported and inspired performers to play different material than they would without the *Brokenheart* computer cues of texts and sounds.

Brokenheart also created the sense of engaging in a new experience each time it was performed. La Berge's interest is in the act of musicking—and the extremes in the process that guided the improvisation. For La Berge, technology is an extension of her technique of performance and acts as a facilitator, becoming another body to improvise with. Technology, for La Berge, meant access to power and the empowering of others through technology.

Her strategies of guided improvisation seek to engage performers in the process, dissolving boundaries and inviting others to play, to engage with technology and the act of musicking. She strives to have performers be alive in the moment of her work. This engagement with technology, guided improvisation, and the collaborative process of re-creation creates works that seek to exist in time beyond the present moment. As La Berge puts it, "I make art that explores the thoughts and feelings we have that continue to resonate after we have thrown something away, after we have moved on from one thing to the next thing" (Madsen 2019a).

La Berge's work, through its intensity, extended techniques, and extremes of expression, text, technology, and guided improvisation, presses us as performers. She encourages us "to let go and then remember what we hold, use and dispose of as resonances from one experience to the next, and how we do that in unpredictable and fascinating ways" (Madsen 2019a). And, in doing so, we experience the intention and emotion behind the meaning of "broken heart syndrome" and reengage in real time in the expression of what it must feel like to become brokenhearted.

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La Berge has been deeply engaged in the world of guided improvisation and electronics for over 40 years. She has stayed the course, with her work, aesthetic, devotion to musicking, and the process of experimentation. She has made her work available through continued performance and recording and established her work in a community of performers and improvisers worldwide. Her work is now being analyzed and discussed as a historical object, with active curatorship of her past and present works. She continues to work in the interarts collaboratively and is true to her mission: engagement in process as a composer/performer striving to be alive in the moment of her work and forging new ground in music technology. La Berge says that, "Technology is the human body including the organ we call our brain. Technology is the machines we play with that help us further understand ourselves. Technology is forever changing" (Madsen 2019a).

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