The evolution of music is pushed forward through the expansion of various parameters. These expansions are the operators that set the stage for further insights. That is the pattern of emerging probabilities. There are several operators. In a previous paper, “Emerging Probabilities and the Operators of Musical Evolution” I examined four in particular:

1. New technologies
2. New playing methods
3. Radical combination of seemingly unrelated musical styles
4. Role of audience

I created an instrument that I called the spring dulcimer (Fig. 1) – a hammered dulcimer that used springs instead of wires like a traditional hammered dulcimer. I considered it to fall under the category of new technology as an operator because it was a new instrument. It had a rather industrial sound. I had an interest in further exploring the sounds within factories and metallic objects up to that point. I found an abandoned brick factory. I made recordings of several rhythms within the factory that I played on the various machines. I theorized up to that point about a way to bring the industrial sounds of factories into a methodical coherent form of instrumentation.¹ This would eventually lead to the creation of what I now call the spring pan kit (Fig. 2).

The spring pan kit combines the spring dulcimer played with one hand, a modified steel pan drum with the other hand and a customized oil drum for the kick drum (Fig. 3) played with the foot. This allows the percussionist to combine both melody and rhythm into one instrument. Percussion instruments up to this point have strictly been for either rhythm or melody but not both. I recall some years ago working at various factories during the summer months away from school and hearing vague melodies in the cacophony of machinery. The combination of steel pan drum and spring dulcimer allows for some approximation of that experience.

A custom fitted piece of sheet metal is placed around the steel pan drum (Fig. 4). This is struck in a similar way to a snare drum. The oil drum has a triangular shape indented perimeter on the lid area. I derived this design from traditional pan drum making techniques and applied it to the design of a kick drum.² The intention was to create low frequencies in the range of a traditional kick drum but with a metallic sound.

² Ulf Kronman, Steel Pan Tuning: A Handbook for Steel Pan Making and Tuning (Stockholm: Musikmuseet, 1992)
industrial sound. In addition I put a custom fitted resonator made from sheet metal inside the oil drum to give it a bit more clash (Fig. 5). Due to the hardness of the metal the felt beater on the kick pedal was replaced with a rubber ball dog toy.

Urban exploration is the interest in exploring old and abandoned sites. They are often sites with historical or cultural significance. The philosophy of urban exploration is to take nothing but pictures and leave nothing but footprints. I have taken a slightly different approach to this activity. In addition to taking pictures I also record rhythms that I play on the machinery of abandoned factories. I use padded drumsticks appropriate for banging on metal and the kick pedal also used for the spring pan kit.

One site of particular interest to me was an abandoned slaughterhouse. Being an animal lover I have pondered over why I felt such a connection to this site. There are certainly many technical reasons given the wealth of sounds that I have found in the machinery. But there is also a symbolic attraction to the site, a desire to somehow connect to it to convey through rhythm the suffering of the animals that died there.
One approach I have tried with some success is a meditative technique by Eugene
Gendlin called Focusing. This is a method for getting in touch with emotions that are
stored as tension in the body. By focusing on these subtle bodily sensations or felt sense
as it is called, one can experience a release of tension referred to as a shift. This shift is
accompanied by insights into the cause of that tension. In Lonergan terms it is elemental
meaning that has been brought to fruition and identified. The identification is the "ah ha"
moment, the second level of Lonergan’s cognitional theory on the four levels of
consciousness. The four levels being, experiencing, understanding, judging, and
deciding. The level of understanding is an insight. The above process is a concrete
example of Robert Doran’s psychic conversion.

There are records of correspondence in the Lonergan Archives between Lonergan and Gendlin. They were very much interested
in each other’s work. Robert Doran also used Gendlin’s early work in developing his
theory of Psychic Conversion.

I have used focusing successfully in creative writing through a technique
developed by Sondra Pearl in her book, Felt Sense: Writing with the Body. I wondered
if this could be applied to creating music and drumming. I have found that trying to
focus for rhythm is significantly different than focusing for written language. Unlike
written and spoken language there is no universally understood symbolism of what a
given rhythm or percussive sound represents. The interpretation of the rhythm is highly
subjective and personal.

A further difficulty for me was that I was attempting to mediate the experiences of
others through myself. I needed to understand what it was like to be an animal being
poked and prodded onto the killing platform struggling while being secured into position.
And then the final moment while ultimately being slaughtered. I watched slaughterhouse
footage of animals killed in various ways. What was the moment of death like? What
was their pain? What was their anxiety? I also thought of the inhumane conditions of
modern factory farming, the privation, overcrowding, and cruel treatment. Their
existence could quite accurately be called hell on earth.

Four legged mammals such as cows, pigs, horses and goats are required by the
Humane Slaughter Act to be rendered unconscious first by captive bolt gun or electric
stunner to the head. Only then can they be hoisted and bled by a worker called a
“sticker” who cuts the main arteries and veins. Cows are then dismembered, skinned
heads removed, eviscerated to remove internal organs and then cut in half. Pigs are
submerged into a scalding tank to remove hair before legs and heads are removed. Then
they are eviscerated and organs removed. Poultry are not protected under the Humane
Slaughter Act and can therefore be scalded alive to help remove feathers. Poultry that is

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sick, injured or of no commercial value such as male baby chicks are often ground up alive by way of rendering.7

I entered the abandoned slaughterhouse with camera and recording equipment. I set up my equipment near the main kill floor where pigs were slaughtered. I lit a candle in remembrance of the millions of animals who died there. I had some idea of what kind of rhythms I would play through attempts of partially developed techniques of focusing meditation for rhythm. A common theme to the rhythms I played that night involved the gradual rise in tempo and volume of a drum roll played on the machinery with the padded sticks that ended suddenly with a thump using the kick pedal. The rise in volume and speed represents the building of tension until the moment of death represented by the sudden loud bang with the kick pedal. One of the challenges I faced was to not challenge myself. I have always tended to play rhythms that were technically complex and difficult. That type of rhythm had no place here. I tried to play non-rhythmically and follow my emotional responses instead of intellectualizing how a rhythm is supposed to be played so that people would be impressed.

The last rhythm I recorded that night had the most significance to me. It was also one of the less remarkable in terms of technical performance. Just moments before recording the rhythm inside the scalding tank I took a picture of my setup arrangement as I often do to keep a record (Fig. 6). On the camera screen I noticed several orbs in the picture. I had seen these on ghost tracker shows on TV. Orbs are transparent balls of light that show up in the picture after it has been taken. I became quite excited at the prospect that animal spirits were there to help me since I was attempting to connect with the site in some way to tell their stories through rhythm. I played the rhythm with the conviction that I was having a mystical experience.

Through subsequent research on the orb phenomena I learned that they were not spirits after all. Orbs are caused by the camera flash reflecting off particles in the air such as dust or pollen that is then refracted off the camera lens in low light conditions.8 This discovery reminded me of the disappointment I felt as a child when I learned that there was no Santa Clause. However, this experience demonstrates the importance of how belief brings meaning to experience.

Fig. 6 Rhythm Recorded Inside the Scalding Tank

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This has some significance in theodicy. I am reminded of explanations of the difference between transformative suffering versus destructive suffering. Transformative suffering being that which strengthens the victim or ultimately bears some fruit. Destructive suffering being that which offers nothing in return leaving the victim to suffer in vain. What fruit can livestock have but emancipation through death? The only good coming of destructive suffering is the deep compassion and love it fosters in those who are witness to the victim. 

But then one is left to ask why it takes such extremes to foster such depth. What does that say about the human condition? The suffering of livestock is generally met with indifference by society. It would seem that for humans who are in a similar situation the only thing that might bring any chance of hope or meaning to that kind of suffering is through belief in a greater power that can somehow rectify this seemingly impossible situation in some eschatological way. But what of the livestock who do not have a belief in eschatology? It would seem that they can only suffer without hope?

Lonergan offers a possible explanation for purely destructive suffering. “Now God's plan, the reason why God chooses such a world as this, can best be conceived as a self-manifestation--or that is one way of conceiving it. The end of creation is the glory of God, the manifestation of God. The degree of manifestation that occurs in a universe will vary with the type of perfection that is desired in that universe. As St Augustine says, divine wisdom thought it better to permit evil rather than to create a world in which no evil would exist. In evil in its fundamental form, which is sin, there is the irrational, the ‘what has no reason.’ God doesn't cause that, he permits it. Dealing with that question, so that it has a meaning, is a rather technical point, but I believe it can be established. And he permits it, perhaps one might say, because insofar as it is permitted, you can have in a finite universe, something of the tension that represents and expresses the infinite good.”

In addition to the suffering of animals there is also the human and environmental cost. Deregulation and non enforcement of antitrust laws under the Reagan administration resulted in faster production rates and smaller meat packing companies being forced out of the market by larger companies. More animals are now being slaughtered by fewer and larger companies. Workers are under great pressure to keep up with the demanding pace of the increased line speeds. The result of this trend has led to greater extremes in animal cruelty and more injuries and deaths of slaughterhouse workers as well as an increase in cases of food poisoning among consumers. The USDA has failed to enforce the Humane Slaughter Act. The number of prosecutions are extremely low for the number of violations that actually occur. The meat processing industry is one of the most dangerous jobs in the United States. One in three plant

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10 Bernard Lonergan, Understanding and Being (Toronto: University of Toronto Press 1995) 374-375
11 See Gail Eisnitz, Slaughterhouse, 62, 158, 269-275
workers suffer from work-related injury or sickness each year.\textsuperscript{12} There is also the relationship between world hunger and the use of arable land in developing countries to grow feedstock that is shipped to first world factory farms.\textsuperscript{13} And then there is the environmental impact of meat production, which is responsible for 18\% of greenhouse gasses.\textsuperscript{14}

I discovered a book called \textit{Slaughterhouse} by Gail Eisnitz in which numerous slaughterhouse workers from many different meat packing plants throughout the United States were interviewed. They all gave very similar graphic depictions of the extreme animal cruelty as well as dangerous working conditions for employees and how the USDA failed to do anything about it. Cows were beaten with pipes, dragged to the kill floor often resulting in broken bones, improperly stunned leaving them to endure having their throats cut, being dismembered and skinned alive. Pigs also were beaten, dragged, improperly stunned leaving them to endure having throats cut and submerged into the scalding tank while still alive.\textsuperscript{15} I realized that my current method of creating sounds to tell their story was not strong enough to convey this kind of hell.

I needed to find a rhythmic representation that went beyond clang, bang and clattering sounds. I tried to imagine the sickening feeling of being hung upside down and my throat cut, convulsing while the blood spewed from my veins. Animals that are bled while conscious will constrict their muscles in an attempt to hold the blood in. I imagined myself tensing my body in futility as I became weaker and weaker slowly losing consciousness. I tried to imagine the shock as the worker cuts off my limbs. I imagined the sensation of my skin being removed with an air knife. I tried to imagine the excruciating pain of being slowly submerged into a scalding tank. Through these dark meditations I realized that I needed to create rhythms using scrapes, scratches and screeches. That seemed to convey the meaning of extreme emotional states better than merely hitting objects.

I tried attaching a turkey caller to the resonator piece on my steel pan drum. I scraped the turkey caller with one hand to mimic the sound of chickens being slaughtered, while making scraping sounds across the springs of the spring dulcimer with the other hand to mimic the sound of cutting and slicing. I used a bow on the spring dulcimer with one hand while scraping the pan drum resonator with the other. The bowing of the spring dulcimer was meant to mimic the sounds of cows bellowing while being bled, dismembered and skinned alive. The screeching high-pitched sounds were an attempt to mimic the pig screams I heard in slaughterhouse footage I had watched.

Through this experimentation I began to suspect that there was a natural psychological and physiological connection between our responses to rough abrasive

\textsuperscript{13} Francis Moore Lappe, Joseph Collins, \textit{Food First} (London: Souvenir Press, 1980) 21-25
\textsuperscript{15} See Gail Eisnitz, \textit{Slaughterhouse}
sounds and extreme emotional states. For me, the meaning seemed to come from the quality of the sounds as well as the rhythms. As a comparison, a scream has a meaning that is immediately understood because of the harshness of its sound.

I also found meaning in the emotional expression created in the rise and fall in speed and volume of the drum rolls played on the machinery at the slaughterhouse, although the sound lacked the intensity created through the use of a bow on springs. The drum roll simulated the emotional expression that could also be created by elongating the sounds through the use of a violin bow. The meaning expressed through the use of a violin bow seemed to come through in the attempt to mimic the vocal expressions of the suffering animals. It is through the mimicking of vocal expressions that, I, the listener can viscerally identify with the sounds in a way that I do not with a mere drum pattern.

I decided to try a different approach to meditation. Repetitive drumming of approximately 4 to 7 beats per second found in shamanic like ritual drumming seems to stimulate alpha theta waves in the brain associated with trance states. I wondered if a drum-induced trance state might help me find a way to connect with the site to convey the story of the animals who died there. I began practicing drum-induced trance states by listening to a recording of repetitive shamanic drumming. Further investigation into shamanic culture has given me a greater understanding of why I felt so drawn to drum at this site. In a symbolic way I began to see my role as that of a quasi makeshift priest/shaman who had been called to perform a funerary rite. The shaman will often perform a ceremony using the drum to help the dead be at peace and leave the physical world behind.

After several weeks of practicing the shamanic drum journey I finally met some farm animals during a vision quest who seemed to be trying to communicate with me. A cow repeatedly stretched out her head while looking at me. I saw a pig walk over to a mud pit and start rolling around while also looking at me. I then saw a chicken repeatedly stretching out its wings in front of me. Through subsequent investigation I found out that chickens do in fact stretch their wings under normal circumstances but they cannot when they are crowded into cages their whole lives. Cows cannot engage in natural movement and behavior because they spend most of their lives in cramped stalls. Pigs who must wallow in mud to keep cool cannot because they are tightly caged and unable to move. What I interpreted from the vision quest was that the events of the slaughterhouse are not necessarily the worst of what the animals endure. I had been so focusing on the events of the slaughterhouse that I had forgotten the impact of the factory farm.

And so I set out to find a way to convey through sound and rhythm the mental anguish of languishing in claustrophobic conditions for an entire lifetime, which drive the animals insane. I decided to visit the slaughterhouse one more time to find a way to convey this using the new methods that I had developed since the last visit. I found a large metal plate in the pen area where the pigs were kept. I stretched a spring across it

and stuck a bridge piece under the spring. I stroked it with a violin bow. The sound was interesting and eerie but did not quite convey the feeling of captivity that I was looking for. However, it did convey a sense of darkness and macabre that I associated not only with the site but also with the manner in which the entire meat industry functions with respect to world hunger, disease and pollution as well as animal cruelty (Fig. 7).

![Fig. 7 Bow on Spring](image)

It is important to remember that current practices threaten both animals and humans because we are both connected in some way. The Center for Disease Control has confirmed that there is a link between the current H1N1 virus and a strain that emerged on a North Carolina hog farm. North Carolina incidentally has the densest population of factory farm pigs in North America.18

After some experimentation with various parts of the machinery I settled for the sounds I got from scratching the turkey caller while holding it against the wall of the scalding tank. I played it in a way that I felt conveyed a sense of tension with sudden bursts of frustration. These are the feelings that I associated with prolonged exposure to extreme crowding conditions. The large metal structure of the scalding tank added a harmonic resonance to the sound.

I decided to further explore a way to correlate Sondra Pearl’s method of focusing for writing with focusing for music. I looked at photos, watched slaughterhouse footage, and read accounts of the animal cruelty. The next step was to freely explore whatever sounds and rhythms came to mind without judgment while recording them. I used the spring pan kit for making bowing and scraping sounds. While listening to them being played back I began to carefully feel my way through them selecting the sounds I recorded that seemed to resonate with what I was feeling. I asked myself what experiences in my own life came closest to the suffering of the animals, ie an injury, emotional distress, a traumatic event. Anything that I could extrapolate from that would approximate the experience of the animals the most. At this point the line between subject and object became more blurred. I would then try to recreate the sounds and rhythms that I selected to see if there had been a shift in how they made me feel. Perhaps a slight modification in the sound would be necessary. I would then record and listen to the sound again repeating this process delving deeper into the feeling and the sound. The

goal was to find a sound that was effective for both the feelings derived from the screams of the suffering animals and the feelings derived from my own experiences of suffering.

It was not as difficult to find personal experiences to extrapolate from to convey the experience of a pig being submerged into a scalding tank or chickens pecking at each other in a crowded cage. We have all experienced the sensation of stepping into a shower or bathtub of water that was too hot. And many of us have experienced the claustrophobic feeling of being a crowded subway train with people pushing and shoving. Another common but more extreme example might be the experience of being smothered by someone bigger than you during an attack.

However, the experience of a cow or pig being bled to death required a bit more thought since none of us has likely experienced anything like it. The closest thing that I could think of to approximate this experience was nausea and vomiting. The manner in which animals will constrict their muscles in a vain attempt to hold the blood in during exsanguination would seem to be similar to the behavior of humans during vomiting.

To convey the suffering of the cows being bled I used a violin bow on springs. I managed to create convulsive sounds that could either represent the bellowing of a cow being bled or the experience a human vomiting. I also used bow on spring to express the screams of a pig being scalded alive. To express the claustrophobic conditions of caged chickens I used a turkey caller held against the side of the scalding tank at the abandoned slaughterhouse.

Warning: Graphic Footage

What this process amounts to is an attempt to use Gendlin’s focusing technique on behalf of a cow or pig by mediating their experiences through my own experiences. This would seem to be a rather complicated undertaking just to create a sound. However, this method is actually not much different from what musicians and composers do naturally. What I have attempted to do is to provide some sort of phenomenological description of the process. In Lonergan terms this process would be a form of self-appropriation. Understanding this process would hopefully create a more efficient way of composing music.

It is hard to imagine how the level of animal cruelty and disregard for human well-being could be allowed to have such free reign. I am reminded of the Milgram

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19 Bernard Lonergan, *Understanding and Being* (Toronto: University of Toronto Press, 1995) 3-4
experiments and Stanford Prison experiment where ordinary people were coerced into torturing and degrading other human beings. It would certainly be easy for the same to be done to animals. It would seem that the slaughterhouse is an example of how power can be used to coerce people into committing unspeakable cruelty to animals even at the expense of their own well-being as well as the public’s.

In the process of examining this issue I have had to ask myself where the fine line is between being gratuitous and genuinely artistic. I feel the need to convey the suffering of the animals yet in some way I feel as though I am telling my own story through them. We need to share our pain with others so that we do not suffer alone. There would appear to be a Solomon’s baby mentality to this. I am reminded of Girardian theories of mimetic violence and how figuratively speaking Satan casts out Satan by imitating. The desire to shock people can be sadistic. I could be asked whether I am gratuitously imitating the violence of slaughterhouse workers upon my audience through my music out of a need for power in the wake of feeling powerless to stop the suffering. But perhaps I am merely imitating the suffering of the animals in an attempt to foster empathy and compassion? Regardless of the motive we can only hope that humankind will one day learn to live in peace with one another and the world and that one day all the animals in the forest will be happy.

Clip 4

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Credits

All music and sound © 2009 Greg Lauzon

All photos © 2009 Greg Lauzon except photos and video for clips 1, 2, 3, 4.


See Monson, “Earthlings” Nation Earth


See Friedrich, "Meet your Meat.” PETA