OF LECHNION. SARUAYON SARUAYON

A BOOK OF ESSAYS & ILLUSTRATIONS BY MARIA CHAVEZ A typical sequence of coin tosses has high information content but little value; an ephemeris, giving the positions of the moon and planets every day for a hundred years, has no more information than the equations of motion and initial conditions from which it was calculated, but saves its owner the effort of recalculating these positions.

The amount of work it takes to compute something had been mostly disregarded—set aside—in all the theorizing based on Turing machines, which work, after all, so ploddingly. Bennett brought it back. There is no logical depth in the parts of a message that are sheer randomness and unpredictability, nor is there logical depth in obvious redundancy—plain repetition and copying. Rather, he proposed, the value of a message lies in "what might be called its buried redundancy—parts predictable only with difficulty, things the receiver could in principle have figured out without being told, but only at considerable cost in money, time, or computation." When we value an object's complexity, or its information content, we are sensing a lengthy hidden computation. This might be true of music or a poem or a scientific theory or a crossword puzzle, which gives its solver pleasure when it is neither too cryptic nor too shallow, but somewhere in between.

Mathematicians and logicians had developed a tendency to think of information processing as free—not like pumping water or carrying stones. In our time, it certainly has gotten cheap. But it embodies work after all, and Bennett suggests that we recognize this work, reckon its expense in understanding complexity. "The more subtle something is, the harder it is to discover," Bennett says. He applied the idea of logical depth to the problem of self-organization: the question of how complex structures develop in nature. Evolution starts with simple initial conditions; complexity arises, apparently building on itself. Whatever the basic processes involved, physical or biological, something is under way that begins to resemble computation.

# 13 | INFORMATION IS PHYSICAL

(It from Bit)

The more energy, the faster the bits flip. Earth, air, fire, and water in the end are all made of energy, but the different forms they take are determined by information. To do anything requires energy. To specify what is done requires information.

-Seth Lloyd (2006)

QUANTUM MECHANICS HAS WEATHERED in its short history more crises, controversies, interpretations (the Copenhagen, the Bohm, the Many Worlds, the Many Minds), factional implosions, and general philosophical breast-beating than any other science. It is happily riddled with mysteries. It blithely disregards human intuition. Albert Einstein died unreconciled to its consequences, and Richard Feynman was not joking when he said no one understands it. Perhaps arguments about the nature of reality are to be expected; quantum physics, so uncannily successful in practice, deals in theory with the foundations of all things, and its own foundations are continually being rebuilt. Even so, the ferment sometimes seems more religious than scientific.

"How did this come about?" asks Christopher Fuchs, a quantum theorist at Bell Labs and then the Perimeter Institute in Canada.

Go to any meeting, and it is like being in a holy city in great tumult. You will find all the religions with all their priests pitted in holy war—the Bohmians, the Consistent Historians, the Transactionalists, the

## INTRODUCTION

(1980 -2012)

My first memory was hearing my first sound:

INTRODUCTION

When I was born, in Lima, Peru, I was born with water in my ears. For the first 2 years of my life, my family didn't understand why I was unable to react to speech and sound around me.

The doctors in Lima, not nearly as advanced in medical technology as America at the time, labeled me either as mute or mentally disabled. But my father believed otherwise. My father has a very low baritone to his voice and when he called my name, he called it with his stomach. According to him, I normally responded when he called for me.

My parents divorced when I was 2 years old and my mother found herself in Austin, Texas with her two young children and some extended family, related from her brother's side by marriage.

My mother decided to apply and was accepted to the University of Texas for her Master's degree in Accounting. One of the perks of being enrolled in the program at UT was that we had free medical care from the University's hospital.

It was there that the doctors looked into my plugged up ears, full of water, and told my Mother, "Oh, she's just got water in her ears and can't hear a thing."

They had a new technology of surgically placing tubes into patient's ears in order to drain the water out. By this time I was 3 years old.

This is all I remember and it is the oldest memory I have of my childhood:

I was sitting in a sky blue room with a small counter and a mirror in front of me. Someone, I believe it was a man but can't recall, removed these large cotton wads from my ears. The person placed a wind-up toy on top of the counter. I believe it was a kind of wind-up chicken or bird. S/he lifted the toy up and began to wind it back. I distinctly remember the "creeeek" noise that came along with the action. I began to get very scared. S/he placed the toy onto the counter once again. It began to walk and made this awful "creeeeching" noise as it moved towards me. I began to cry. I turned my head, wailing in tears, looking at my mother, who was sitting with my big brother, crying and begging them with my eyes and arms, to save me. They

had these uncomfortable looks on their faces, as though they couldn't do anything. It made me more upset. The sound was awful and I was so afraid.

Within the next few months, following the suggestion of a speech therapist, my mother enrolled me in a school for mentally disabled children; since I was now able to hear but had missed so much sound during the most impressionable years of my life.

A few months later, the teachers at this special school called my mother in for a conference. They told her, "Maria is ready to go to a regular school now. She is very quick and is surpassing all of the other students in this program."

she tells me this part all the time:

A teacher told her:

"She is already speaking at an advanced level and will not stop biting the disabled children. She needs to move on."

My mother, still worried, expressed her anxiety about moving me to another program that was of my average grade level. Would I be able to communicate?

"Don't worry." One doctor said. "In a few years, you are going to wish that she was never able to speak at all."

Apparently, she wishes it everyday...

Since then I have always been enamored with the possibilities of sound. I find chance, time, sound and the relationships between them, fascinating. The turntable was the tool that provided me with the situations to understand and cultivate these relationships.

This book of essays and illustrations is meant to outline all of the basic abstract turntable techniques that have been developed on one direct drive turntable with one basic DJ mixer that contains 3 EQ (Bass/LF, Mid, Treble/HF) settings.

I am ambidextrous but was taught to hold a pencil with my right hand. For this book, the position of the player is right handed. I hope this doesn't deter the left handed turntablist. This only applies to the general equipment setup and can be adjusted for the left handed players.

All techniques were developed during performances only, utilizing chance procedures, accidents and energy from the audience.

The placement of the turntable is NOT in "DJ battle position"; it is in the normal listening position with the tone arm sitting perpendicular to the player.

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CHANCE PROCEDURES ON TURNTABLE

The "Situations" essays were written to show other methods that the reader may find themselves in while implementing these techniques.

My illustrations act as a flashcards for the reader to tear out and combine into different "Vocabulary" compositions at their leisure. By tearing out the illustrations, this book/object no longer acts as an illustrated guide but becomes a simple collection of essays about a certain turntable practice.

#### "INVOLUNTARY PURIST, 2003"

Please note that there is no added, outside equipment needed in order to achieve these techniques. The reason stems from my early interests in only emitting sound that I could physically generate from the turntable.

In 2003, I began to consider myself an "Involuntary Purist".

At the time of my development, I didn't realize how much I valued the sound of friction in a simple amplified state but all of my work was being focused on this scenario. That is why I called myself "involuntary", because I didn't realize how strict I was being about not including outside equipment in my basic setup.

When I began to develop my work I decided that for the first two years of my turntable practice I would not listen to the works of other turntablists around me. I felt that I didn't want to be influenced by other artists that had already discovered this means of expression. I wanted to make sure that this new vocabulary would be my own. Comparisons would only be coincidental and respected.

From this choice, which in hindsight was a valuable one to my practice, I have found that others in my field have noticed a difference in my sound choices when compared to other abstract turntablists.

### "THE BEAUTY OF DESTRUCTION, 2003"

"The mistake is outside the intended course of action, and it may present something that we never saw before, something unexpected and contradictory, something that may be put to use."

- Shaun McNiff from the book, Trust the Process: An Artist's Guide to Letting Go.

In 2003, I developed the term "The Beauty of Destruction" in order to make sense of why I was allowing my practice to ruin expensive styli and records for the sake of performance. I was constantly approached by DJ's, telling me that what I was doing was wrong. But I saw the destruction happening to my

equipment as opportunities for more sound development. And in the end, I can look back on my decade as an abstract turntablist and say that this process was beneficial to my practice.

The goal for the player reading this book is to make the connection that the electronic companies have conditioned the consumer by creating an imaginary importance on their products, thereby creating the Hi-Fi audiophile market that we see today.

Let go of the preciousness of the materials being used in this book and the whole world of turntablism can break open.

#### "THE LANGUAGE OF CHANCE, 2006"

Another point that was mentioned in the preface was the need to break myself away from the object of the turntable.

The turntable is a fascinating machine, but unfortunately, due to the uses that people developed for the turntable in the later part of the 20th century, it is marked as a representation of an identity/stereotype.

I wanted to take the time to write about this because I have found myself, all too often, in scenarios where people create assumptions about my practice then end up trying to place me in situations where my work does not belong.

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NTRODUCTION

As a sound artist, I wonder about a time when the sound work from a turntable can be viewed for only the content that is created by the machine and not because one is using the machine itself.

On a personal level, my biggest fear is that my work will only be recognized as work made by a woman, who is Peruvian and had ties to DJ culture.

I hope that people will recognize my work for what it is on it's own and not for what identities people can ascribe to me as a human or to the machinery I chose to work with.

My practice was not derived from my indigenous/Latin/ American culture, though I am proud of my heritage. My practice was not created because of my gender but I believe that women are amazing humans. And my practice was not influenced by the late 20th Century stereotype that looms overhead.

My belief is that my practice and the techniques in this book are derived from the neutral positions of chance and improvisation.

The Language of Chance affects all people, regardless of gender, race and is free from marketing stereotypes.

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CHANCE PROCEDURES ON TURNTABLE

Now that all the basic ideas and techniques have been documented to the fullest extent, I feel I can move on from this machine into new uncharted waters.

I wish you, the reader, the best in discovering these sounds, developing your ideas with these techniques for encouraging accidents and hopefully, in the process, creating your own practice, ultimately dictated by our friend and foe in life, Chance.

- Maria Chavez, 2012

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ITRODUCTION

## **NEEDLES, STYLUS**

A.K.A. THE PENCILS OF SOUND

I recently wrote an article about the Koetsu Cartridge, one of the worlds most expensive cartridges, demanding up to \$20,000 for a cartridge made entirely of Onyx, diamond and platinum. In the article, I wrote about the needle as "...an interesting little object that holds the world of recorded sound in its hands."

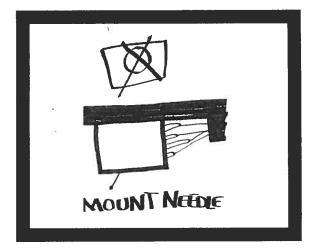
The term "pencil of sound" came to mind early in my sound career while I was still living in Houston, Texas.

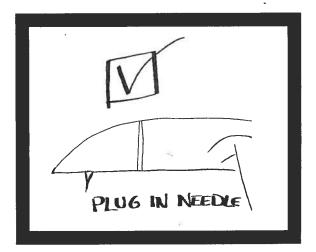
The pencil is such an interesting object. It can express a multitude of ideas through different phases of tip shape and yet the traces of its actions can be erased, allowing for a new start, again and again.

I feel that the turntable needle, being a sound-emitting object, can be seen in parallel to the pencil.

The parallel of a pencil drawing and a needle producing a sound piece via the turntable, in my opinion, is an obvious one. They have similar shapes and can be sharp, dull or completely break off.

In the next section, I will discuss the various ways that a stylus can break during performances. Throughout the book, I will refer to these names as suggestions of which type of stylus will work best for each technique.





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PROCEDURE CHECKLIST

NEEDLES, STYLUS

VOCABULARY / TECHNIQUE

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