

Blank Forms

04

INTELLIGENT LIFE



OF PATTERNS AND PATTERNISTS:
A SONOCYBERNETIC MANIFESTO
Onyx Ashanti

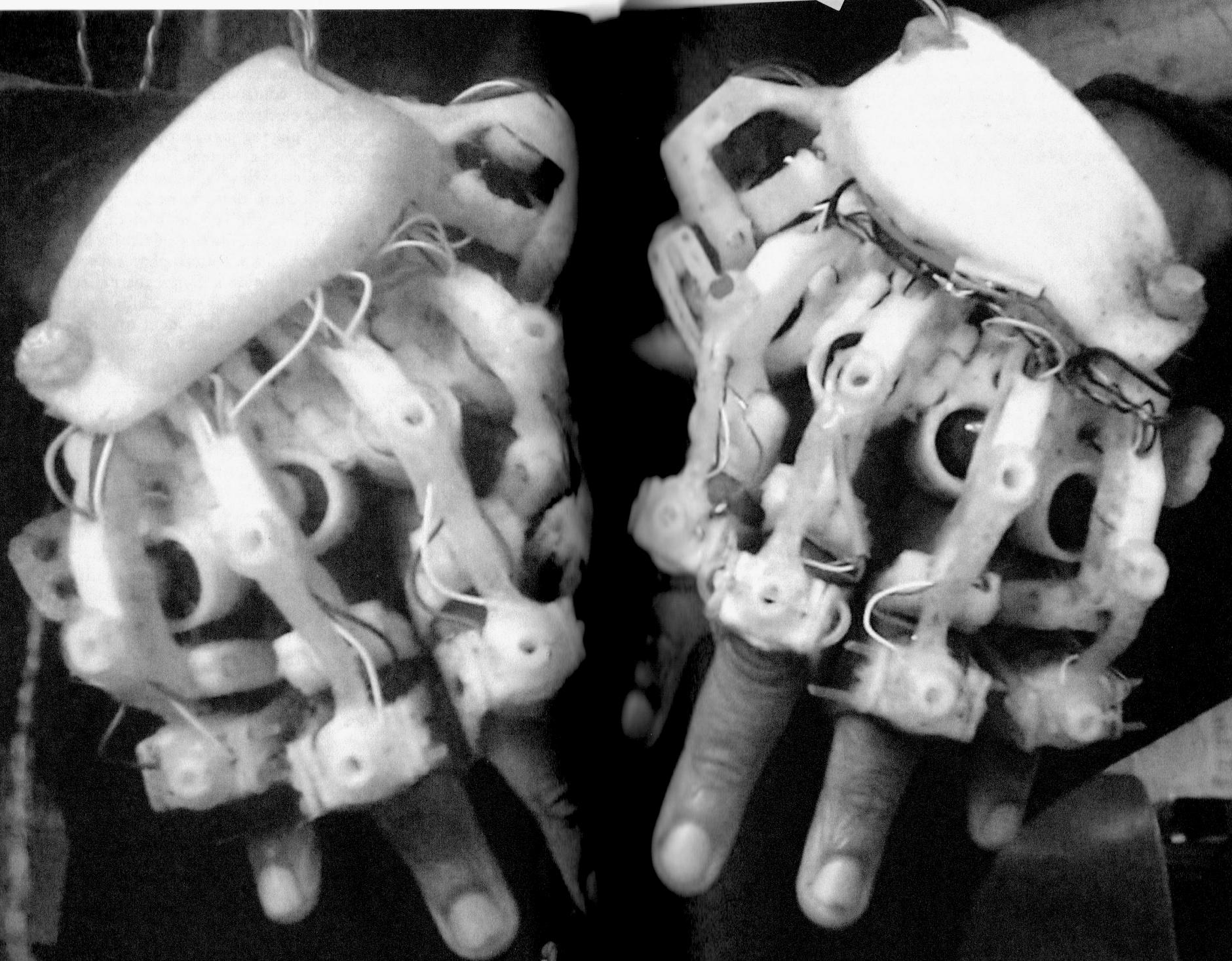
Published online on March 16, 2016, via Onyx Ashanti's blog (onyx-ashanti.com). This version, formatted for print, has mostly retained the original's language.

Onyx Ashanti is a musician, performer, programmer, and inventor of the Sonocyb, a continually evolving, malleable interface of prosthetic synthesizer controllers that Onyx 3D prints at home and uses to articulate electronic sound in conjunction with bodily motion. Growing up playing jazz saxophone in rural Mississippi, Onyx was swept up by rave culture in the 1990s and transitioned to playing wind controller, with which he collaborated with Marshall Jefferson and Soul II Soul, performing in nightclubs around the world. Onyx's creative curiosity led him to, first, develop the Beatjazz controller as a music-making device for hands and mouth, before studies of cybernetics and an epiphanic discovery of free jazz ushered in his current devotion to Sonocybernetics.

A neologism that for Onyx represents an empowering turn away from the shackles of entertainment towards an ontology of becoming, Onyx uses the construct of Sonocybernetics to feed sonic and technological questions into a network of perpetual self-programming. Calling himself a "patternist" after the work of Afrofuturist science-fiction writer Octavia Butler, Onyx believes in the potential of granular sound to herald a new age of communication beyond the cumbersome limits of spoken language. Using the Sonocyb, Onyx translates the gestural body language of his hands, feet, and head into fractal emissions of synthesized sound reminiscent, at times, of the more eccentric, privately released strains of late '70s and early '80s French *musique concrète*. But Onyx doesn't make records, preferring to document his daily experimentations, street performances, and sonified grocery shopping via his blog, social media, and YouTube.

On March 16, 2016, Onyx expounded upon his theories on Sonocybernetics with a blog post titled "Of Patterns and Patternists: A Sonocybernetic Manifesto," reproduced in meatspace form below. Three years later, he spoke to me—while wearing and playing the Sonocyb—from his squat in Detroit, where he now lives and works.

—Adrian Rew



I feel like I have some theories. some gleaned from experience...some from research...some i'm just making up because they feel right and I will roll with them until I create or discover better ones. I use a lot of made up words to describe some of them-especially the use of the prefix "sono" which refers to sound or "sonic"-so there is no need to message me to "inform" me that this word actually means "that"...I don't care. these words are my spells...I am merely sharing them for those that give a shit.

WHAT IS MUSIC?

music exists between dimensions. it is a sort of catalytic glue between what we think of as the physical plane where our bodies reside and the plane of thought, emotion, dreams...a sort of mathematical plane that informs the thought plane and the physical plane. sound exists without you. if a tree falls in the woods, does it make a sound? yes. sound does not need an observer to do what it does. cymatics can demonstrate this. sound creates a spherical bubble of order that permeates matter. so sound exists without a human observer to hear it. music...hmmm...that is a different question. music implies a greater order. more complexity...intention. if sound can influence and create so many things in nature, what must music be able to do?

in sufi mythology, existence began with a great sound and sound is a form of mathematical expression. we live in a deeply ordered mathematical reality. the interaction with this great truth is profound to a degree that I am humble to. I seek to know it and to create ways for it to order itself through me. to be an ordering conduit for its expression. any truth above, below or around that will come through how successful I am at that core purpose.

in my studies over the last few years I see that sound and music affect every aspect of the human construct. music and sound wash over the entire body, which just so happens to be coated in neurons...we are distributed computing systems. our mind is not simply in our heads...nor completely in our brains...it surrounds our entire body, I believe.

there is the music of computation and technology, expressed as pure binary math and boolean logic. the music of light and spec-

tral frequency. the music of biology and its fractal expression of information. what is music? it is the point and the next but it must be asked AS music.

Terence McKenna once said, while quoting someone else that “language was invented to lie.” that was as funny then as it is now because the word that I keyed into was not “lie”...it was “invention.” language as invention. this is odd. it seems as if language just always was. that we as a species just popped out talking, but the more I study the more I see that this isn’t the case. carbon dating of ancient musical instruments suggests that music is older than homo sapien. so if language is an invention, then that means we can invent others, right?

I mean, we do it all the time. there are dozens of programming languages used to talk to computers...languages of law, medicine, money...languages of the drum and of the body in the form of dance, gymnastics, fighting, swimming, car driving, motorcycling, climbing and musical expression....all languages with syntax and nuance and emotion and symmetry.

MUSIC AS A LANGUAGE

I've been hiding out, working on a new kind of language for a few years. something that would be easy to begin learning (especially since I will have to learn it as well) but could expand beyond what one believes to be their capability to learn. in fact, this system would enable the capability to communicate multidimensionally, with “dimension” defined as mutually exclusive realms of expression. speaking and dancing are two different forms of communication but painting and cooking are as well. they are dimensions of expression. so my idea is to create a language that is, by its nature, multidimensional. the elements that will weave all the dimensions together are sound, binary logic, computers, 3d printing and basic electronics.

I call this form, Sonocybernetics.

the idea is to learn these basics in a manner that feeds the idea. that sentence is recursive which means that it feeds back into itself. the

same way that we humans learn by doing things over and over is recursive. the very idea is recursive. learn something that feeds back into itself to constantly give feedback while also propelling forward based on this process. and since it's not one thing-one dimension—that feedback cross pollinates all the things you do, resulting in increasingly serendipitous results. how you do one thing will have a direct impact on how you do another thing because they are all governed by the same core idea. my 3d printed designs have a direct impact on their playability which influences how they sound which influences how I move which influences the expression of the data they generate which influences the machines I have connected to those data streams....and so on...

the basic structure of sonocybernetics rests on a number of core “pre-elements,” the first of which is to always move toward and embody open source philosophy as a life philosophy. language can not thrive if one has to ask permission to use any aspect of it. any non-open source elements must be either reverse engineered into something that can be shared or pushed to the outside edges of the idea...never the core. when I say “pre-elements” I mean a few very specific tools that form the core toolset.

- a computer, running linux (preferably the raspberry pi platform)—yeah I know...linux is for geeks and nerds, but guess what you're gonna have to be to do this? yup. this is not for people who want to take the easy road. *if you need it easy, go do something else...this isn't for you AT ALL. don't waste your time. this is powerful, not because it is easy but because it is NOT easy (note: it's not hard either, it's just strange, which some mistake for hard)* and currently, the world runs on linux. to know linux is to realize you are connected to the nervous system that runs the world and it just happens to be completely open source meaning that, later, you can change it how you feel.
- Pure data, specifically, pd-extended. yes, I know..either you're not a programmer or you use c++ or javascript or python, well I chose pure data because of its inherently spatial layout and power with number structures that make it easier to show to someone at a glance without having to hunch over and read down a long list of text. I find pd to

be soooo much easier to teach and to share and its easier to share ideas of fractality and nesting. also, it is a gateway to programming in other languages, which can be used to create pd objects.

- a reprap 3d printer—yes I know....you use a makerbot and/or you don't want to build a 3d printer from scratch but the reprap is what the makerbot is based on and steals all its upgrades from. it is a machine that makes machines! and not only can you build it but you can evolve IT...as YOU evolve. this is very very important as the dimensions move out past plastic forms and move into the micro/nano scale as well as the macro scale. because if you can build and evolve a small reprap, you can build a house sized one as well as a molecular sized one, so internalizing this technology as DIY is important. and 3d printers don't have to be overly complex.
- the arduino platform—yes I know...you're not a hacker and whatever else but understanding the arduino allows you to program functions directly into the machines you make, as in the above example. your printed machines become programmable. and you learn to use and eventually create better faster microcontrollers later.

with these tools you have the basis of a multidimensional language. you can speak sound, physical form, code and current simultaneously. and these form the basis of completely new kinds of thought not possible any other way. these tools allow for the view of computer as prosthesis. as recursive augmentation; a tool for exploring self which, when focused outwardly, reveals an increasingly malleable programmable reality. this can give some insight into parts of the process as well¹

HOW DOES IT WORK?

sonocybernetics is based on cybernetics, transduced using patterns of sound that evolve as you evolve. cybernetics theory is based on two dimensions of communication systems; information structure

and the physical representation of that information. feedback into the system is key, as feedback of high enough gain takes over from the input. so let's look at that statement like this; you're a jazz improviser and you're playing with your combo and you begin a ballad. you are inputting information into the system but instantly you are listening to your band mates who are also inputting information and you all stabilize on a key, a tempo and mood. but then maybe you decide, as a flourish, during your solo, to play something that sounds a bit like salsa, which instantly makes your drummer hit a bit of a salsa beat and now your bass player has jumped into the action and you're now all playing salsa based on subtle cues of information feedback. as any musician knows, this happens all the time. jazz and cybernetics have more similarities than you would imagine. this feedback can be sono-cognitive, mechanical, design, programmatic, realtime, dietary, kinesthetic....

the feedback relates very specifically to the "sono" part of sonocybernetics. this is the part i've been trying to figure out for years. ordered sound has an imprinting effect on the physiology of the brain, which means that it affects the way you think. ordered encoded sound is the glue that makes the whole system work in a manner that is self evolving and self iterative. this is a new kind of music, specifically for creating new forms of sound order:

BINARY LOGIC

this system regresses to a base2 number system. the whole idea orbits around the "on" and the "off" pair. as you will note, all computing is already based on binary numbers but binary number systems have been around since ancient egypt and probably longer. so it is a system that is simultaneously ancient old and new new. it is based on multiples of 2 but at its simplest it's easier to think of it as groupings of on/offs called "bits." if you touch a surface with your index finger, this could be considered on. if you lift your finger off that surface, this is off. congratulations, you have just completed a 1-bit calculation. with 1 bit, you have 2 positions-on and off. and "off" is equally important to "on." without an off, there is not music. there is only a building cacophony of sound. sound is ordered by off. music is ordered by relationship of the off to the on. this is what the bit represents, musically. you can do a lot of very relevant

1 <http://onyx-ashanti.com/2014/04/10/how-to-design-a-wireless-3d-printed-digital-musical-interface-quick-and-dirty-tutorial/>

things with 1 bit. drumming comes to mind, as does morse code. you can change the spacing between the on/off to get different rhythms as well...that is with just 1 on/off. with 2 on/off, or 2bits, you now have access to 4 positions;

1.00 off/off
2.10 on/off
3.01 off/on
4.11 on/on

an easier way to think of this is with drums and drum sticks which are 2 on/off's. many forms of african drumming were used to transmit messages over long distances, complete with recursion (resending the message over and over again so that the intended message is received), error correction, routing and switching, so binary logic has been with us for a really long time, which was why it started making more and more sense.

12-tone equal temperament is not very good at controlling robots or communicating or evolving. it was made to make orchestras sound good together. this was the hitch point for me for the last couple of years. it was the one thing that had to go. it was hard to think of throwing away 30+ years of experience, at least it was until the john coltrane revelation.² he had to rip his way out of it but beyond that, his tools were always bringing him back to it as a starting point every time he touched his horn. I have no such limitations. whatever I do not have, I can create. pure data can convert any number series into any type of frequency output I deem relevant-ultra low, below human hearing or ultra high into radio frequency range and beyond. so it was with this in mind that I decided to step away from sax fingerings and 12 tone ET as a primary sound interface concept.

there is another form of input that is crucial; the analog input which I call a stream. this is the other stuff-sensors, breath, motion...all the stuff that isn't simply on or off. so if we go back to the finger tapping example, this is tapping with intensity or adding an accelerometer to the 2-bit shaker so that the angle it is being shaken at can be used as input. with bits and streams, you've got just about any sort of input covered. every added input is considered either an added bit or an added stream. in this way you are

able to completely maximize your input potential. it doesn't mean that you have to, it simply means that you can. so rather than 2 buttons just being 2 buttons, they can be 4 positions. 3 buttons can represent 8 positions, 4 can represent 16 positions, but for the sake and scale of this system i've designed it around a 8-bit matrix, with a total of 255 positions.

THE 8-BIT MATRIX

I believe that binary numbers are the key to this sonocybernetic system, but it's not that easy. there has to be an initial limitation—a learnable one—but one that can one day be expanded easily. that limit is 255. this is the full range of 8-bit numbers. the 8 fingers on my hands can create 255 positions. if I include the thumbs, it shoots up to 1024! if I were to try 16 bits, i'd be trying to swim thru 65,000 positions! that is outside the realm of comprehension for me right now. the goal is to create a full 8-bit "pattern" in my mind, then evolve from there. this pattern would consist of any number of bits up to 8-bits then any other range of bits would be another group of bits. all streams would have a range from 0 to 255. in this way everything has a definable, learnable space that it operates within. instead of learning 12 octaves of 12 notes, this system would be 1 range of 255 note intervals, definable in any way the "patternist" sees fit. 255 becomes the resolution of a grid that is $255 \times 255 \times 255$ which results in over 16 million possibilities ! in multiple dimensions. 255 notes, 255 parameters positions, 255 points for each sensor range....there is a mind boggling range of combinations to be explored.

within this initial 255×3 matrix, possibility is granularized and can be built up in any way that suits the patternist. let's say I want to use sax fingerings. I do not have to discard the binary input system, I merely need to assign interval relationships to the keys that I normally used to finger sax notes so in that way I can play sax fingerings but I can also play any binary finger combination and play those intervals as well. this applies to ANY MUSICALLY RELEVANT INPUT, like flute, drums, trumpet, mpc drum pad... anything! the interaction can be as familiar as the pilot wants it to be but can mutate outward to encompass the maximum number of input possibilities. let's say I want to type words. I can assign

2 <http://onyx-ashanti.com/2016/03/14/the-john-coltrane-theory-pre-element/>

letters to numbers and assign sound intervals to letters based on vowel spacing. these "scales" are endless in function and variety. scales for gcode (3d printer control), scales for algebra. scales for video projection control, hexapod interaction, drone flight control AND feedback from proximity sensors...it's infinite.

most importantly, is that every "bit" of data is stored. it forms a fractal map of your journey. the 8-bit matrix is a sort of holographic "read-head," visually, but it is powered by a time-coded data format that lets you look at every moment you interact with the system, which will become more and more important over time as more intimate sensor information becomes integrated, such as EEG, and full body "state" information.

OF PATTERNS AND PATTERNISTS

I realized something interesting in the last couple of years; music by itself is meaningless. what matters is the patterns. same goes for sports, paintings, agriculture, space flight, writing, swimming...all human endeavors are all pattern based. we discern patterns...we create patterns. we make predictions based on those patterns and when someone can challenge our predictive capability, we either praise them or burn them at the stake.

everything is patterns!

not only that though. we seek out "novel" patterns. patterns that tickle our sensibilities in some way. this is the reason why a style of music or design becomes "old" or "classic"; because the ability of that pattern to be constantly novel has been exhausted, but the stored exploration in the form of records or clothing style yielded a stability of beauty, form or usefulness. some people, like me, seek out the patterns in sound and people and internet information flow and others are obsessed with sports for the exact same reason. they predict that this player or that will score (x) much this season based on (y) and because of the new rookie they picked and the loss of this or that coach. same goes for video games...everything to humans is patterns and prediction.

it is with this understanding that I decided to test a theory back at the beginning of 2013: it was at this time that I decided to stop playing "music" as I had understood it to be, and to begin playing evolving patterns of sound. I was fully ready to have fruit thrown at me and stop getting bookings but I hypothesized that as long as the patterns were ordered, complex and continuously evolving, I would be talking directly to the pattern part of the human brain and the rest of the human would stay put and absorb it and I was right...very right. from that moment, I became a patternist.

the term patternist is my chosen name for what I do, what I am and what we do together as sonocyberneticists. I cribbed it from an octavia butler book called "mind of my mind." the patternists were a race of telepaths, eugenically created over a time span of about 5000 years by an immortal named Doro. their defining feature as a group besides being powerful telepaths, telekinetics and shapeshifters was that the "pattern" allowed them to live together in harmony and draw strength from each other when necessary.

my personal definition is slightly different. each patternist creates a pattern that evolves as they do. anything they want to learn or do can be grafted into their pattern. in my case, even though 3d printing isn't necessarily a musical skill, it is part of my pattern, as is everything I want to learn, because if I can break down anything I want to internalize, to a sono-spatial kinesthetic interaction construct, everything reinforces everything else (i.e., I move in a way that lets me create sound in a way that affects me by positioning the sound when it sounds like it is coming from anywhere 360° around me, by using pure data's built in surround sound panners). the more complex this meta pattern becomes, the more easily new information can be grafted into it and the more readily it can be imprinted. this process of imprinting is called "psycho-cymatic, sonosynaptic, reconfiguration." this is the actual writing of patterns of meaning onto the brain using spatialized sound. I should note at this point that I reinforce this process with brain stimulation modalities such as transcranial direct current stimulation, and with cognitive enhancing "nootropic" compounds such as piracetam, both of which I have been doing for a number of years.

this process has been happening with me since at least 2012 when I got my 3d printer. everything I do and learn feeds a meta-pattern

in my mind which affects how my brain works and processes future information. but it was hampered by 2 things;

1. music as entertainment rather than purely patterning modality
2. the music itself, because of the leaning toward music as entertainment, I wasn't using the music to store sonic patterns of relevance to things I was learning or wanted to learn. the system was only meant to sound good and not to design with or run a 3d printer or operate a mechanical system like a vehicle or a robot. this is an early sonomorph of constructed intent that moved away from a listener model toward an encoded intention model.³

but now, with a binary core concept, the system speaks the same language as the computer it is running on and can be programmed, in real time, to interact with the brain and become a system of expanding feedback; what one hears influencing the next thing they do, perpetually. the feedback is the key. this does not throw away beauty and symmetry or "funkiness"...it re-imagines them as having a new relevance as encoding metaphors. syncopation can have a function...something that makes a body move has a pattern that is relevant so all this pattern talk does not mean that said pattern must sound like r2d2. that said, you hear what I have sounded like? well, its gets stranger...

PATTERNIST != CYBORG

I have written about my issues with the word cyborg here⁴ and here⁵ so, to summarize, I'm not a cyborg. primarily because

cyborgs do not create themselves.

they are created by someone else for someone else's purposes and not for the cyborgs' transcendence and evolution. in addition, the concatenation of the terms "cybernetic" and "organism," upon closer inspection, is very dis-empowering. it implies that a system of greater order is being "imposed" on an "organism." this to me is

3 <http://music.onyx-ashanti.com/track/pryr4tmy-sonomorph-1>

4 <http://onyx-ashanti.com/2014/01/07/what-would-the-word-cyborg-mean-if-it-were-invented-today-part-one/>

5 <http://onyx-ashanti.com/2015/03/26/what-would-the-word-cyborg-mean-if-it-were-invented-today-part-2-of-a-series/>

the same type of wordplay that reduces a "citizen" to a "consumer" or turns the "people" into the "public." Norbert Wiener's book on the subject was entitled "cybernetics: control and communication in the animal and the machine" and so concerned with the misuse of this technology was he, that he wrote another book entitled "The Human Use Of Human Beings: Cybernetics And Society" to discuss these topics. "cyborg" is a small word with great power. I designed "Onyx Ashanti" as a word of power. "beatjazz" is another such word as are "sonomorph," "sonic fractal matrix" and "exo-voice"...inspection of the elements of their construction reveals words of empowerment and strength.

I have been living with the word "patternist" for a couple of years now, just to see how it evolved over time, and in that time the word has come to mean more than it did when I chose it. when viewing patterns as multidimensional recursive information structures, the full time investigation of such structures makes calling oneself a patternist more and more fitting. it is a word that can grow and evolve. it gives the direction of focus, more light without being overly general.

technically, I also like the term "sonocyberneticist," but that sounds more academic than im comfortable with in general use. I also sometimes simply use the term "pilot," but that's more of a slang than a descriptor. patternist and patterns work extremely well and their use will easily detract from any cyborg references once they have more of an established body of expressions. note though: the use of the word "patternism" is not used. that is something else entirely and feels more like an ideology than a growth term. sonocybernetics will work in those moments just fine.

THERE IT IS

that is the super super basics of the idea. this rabbit hole is crazy deep but I don't want to monologue on it without working examples, which are in the works. now when I describe things that are coming, this can be the proper reference point. everything refers to this now. and the best part is, now that sonocybernetics provides such a comprehensive umbrella under which to place all of my expressions, I don't have to shun beatjazz anymore. it is a "form" within sonocybernetics and a sonomorph is another. from

this point forward, everything refers to sonocybernetics as the ecosystem within which everything else lives and propagates.

INTERVIEW WITH ONYX ASHANTI
Adrian Rew

Conducted on March 30, 2018, via Google Hangouts. The transcript has been edited for clarity and is accompanied by scans of pages from Onyx Ashanti's notebooks. Previously unpublished.





ADRIAN REW

Are you wearing the sonocyb right now?

ONYX ASHANTI

Yeah, yeah, I'm working on—I'm adding some stuff to my hands right now. Let me see if my voice thing is working. No. It could be not working... Let me see. Check, check. [Echoes; singing] Hallelu—

Yeah, so it's working. I have to turn it down a little bit. Right now it's just a loop and an echo. You know. It's not doing a whole lot yet. [Echoes fade out]

AR

What are you currently working on developing? I've seen a lot of your social media posts of feet synthesizers lately...

OA

The feet have always been a part that was coming. It's just that I knew that I had to take that part more seriously, because if—I mean, not more seriously, because the other parts were being taken very seriously as well, whatever that means in a design context. I've been slowly moving towards the feet. So it's not so much about like, about trying to make something to fit into an existing paradigm. It's thinking about all the things that I would need or want on my feet, why they're there, and what their purpose is beyond just, you know, sonifying my steps. And the thing is, I feel really strongly about the design trajectory that it's taking right now; it's really kind of going into a really interesting space. It's not just going into a space of like, "Oh look, it's dance shoes, or, like, magic music shoes, or any that kind of thing." It's like there's a whole other set of criteria that have popped up in the last couple of weeks. So it's very interesting to kind of watch it emerge.

AR

But you started with the hands, right? Why the hands?

OA

Because I'm a sax player. I was a sax player. So I wanted to have something that was going to take all of that dexterity practice and at least play with it. So the first one that I made was played like a saxophone. So, you know, it was just basically like a self-made wind controller at that point. And then, by the time I started on this version, about may-

be three years later, there was the—it was showing that it could be something else if I didn't throw too many pre-existing concepts at it. So, really, all I wanted was for it to be biomechanically available to programmatic intent. So, something that I can just wear out.. You know, when I go out, say, for instance, go jogging or something you know—that's something that I'm looking at, jogging—but I can move furniture with these things on. I can be out in light rain... You know, I can't get them like horribly wet, but a little bit of rain doesn't mess them up. So they're reliable, and they're something light, comfortable—comfortable means something else now, so—it's like, now it's just refining them. It's little refinements now, down to tiny little things that change the functions. Or evolve them, I should say.

AR I remember last time you were in New York we went out to a bar, and were hanging out, and you were gesturing with your hands as one normally would to accent their speech, but then you were also simultaneously sounding with them through your portable speaker. Is there a correlation, you think, between the gestural language you use and its aural, sonocybernetic output?

OA Well the gesture, the gesture creates the sonic output, so that the correlation is very direct.

AR Yeah, but do you think the actual content of the output relates to the human meaning of the visual gesture?

OA They can. It's like, that's the thing that's nice, is that it doesn't actually have to—you know, right now it relates directly to whatever my hand is doing. Like, it's very direct. But it can be intermediated, so that the hands go into one space, you know, one intention matrix, and then are directed to the synthesis, which responds to what comes out of that matrix. Right now, it's direct. I want that—that's the mode that just has to be there, to move the hands around in this kind of sono-space, this sono-temporal space. So just moving the hands around in that space is kind of—you know, there's that dexterity training that goes into that

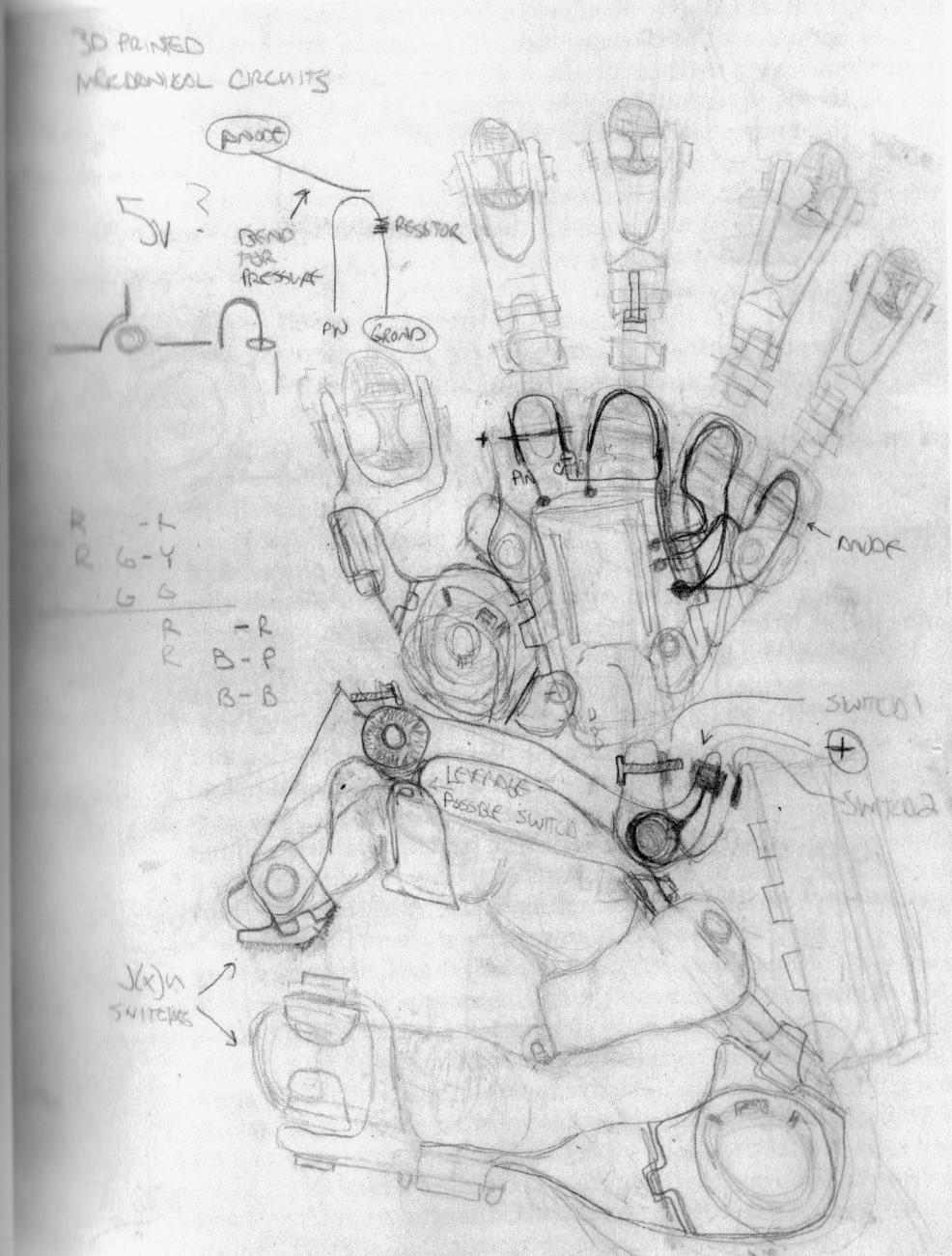


Fig. 11

Page from Onyx Ashanti's notebooks.

space and it's the hands—you know, my hands feel a lot better for all of the movements that they do. So, then, the movements where it's about doing a very specific thing, those are secondary to the movement of the hand, or just the enjoyment of moving the hand, in hearing it move.

AR I think you wrote somewhere that you thought sound expression was more complex than verbal language.

OA Yeah.

AR Do you think we're ready to receive that kind of complex information, as human beings?

OA I mean, we've always been ready. I mean, that's what we are—we're that kind of a bee. We're the kind of bee—bees make honey. We make all of this shit. We make all the good shit and all the bad shit. We make it all. You know, we process memory in a very particular kind of way. And when we do it properly, technology comes out—whether that technology is showing someone that you love them, or building a car, or agriculture, or, you know, language, or whatever—it's all technology. I'm not talking about just digital technology, I'm talking about being able to turn memory into whatever kind of tool or artifact that one would want. You know, so, it's exactly what we do. And right now, I don't know, the myth that I play with right now—like I said, I mean, I don't really deal with things being true or not, I'm more interested in whether or not they're useful and interesting, right? And so when I look at, like, right now, this now moment, there is a lot of networking happening—networked machines, networked vehicles, networked people—and this cross pollination of ideas and communication is yielding a lot of interesting output, right? So, it seems like it can be interesting to kind of interact with this collective, always on, ever growing space sonically, you know, as a kind of sono-spatial logic that has a musical aesthetic aspect too—you know, beauty and all of that—but that is precise at building a kind of architecture of meaning. And the spoken languages don't go away. That's very useful for programmatic things. Programming

the system, reading a book, all that information isn't going to go away. I'm just looking at it as, here is a raw kind of output. In language. Let's call it a raw output. That there are ways to parse that output that don't include reading it, as, you know, linearized symbols sequenced together into words and sentences and paragraphs, that that can be sequenced together as music. A kind of music that's specifically for that. But then another music for, you know, drones, another music for, you know, Facebook responses, another music for, you know, the same as there are a bazillion endless genres of music now. You know, it's interesting to ponder the idea of data musics that are comprehensible by machines and humans simultaneously.

AR Yeah. So, you still consider what you do as music at this point?

OA I mean, there's always that aspect that's there and, you know, I mean I like groovy stuff, you know, I like groove, or I love groove, effectively. Being able to just kind of enjoy the sound of something and just really get into that beauty space. You know, data that can be expressed as beauty is going to, probably—I mean, it's gonna be easier to compound that over time. Because it feels like if it's beautiful then that structure will be more memorable. And then memories of that structure can be maintained and built on because there's a beauty that's going along with it. So I'm very much into the beauty. But I'm very much also into the idea that these things can be transducers of meaning.

AR Reading about your earlier “beatjazz” period, it seemed like you were more focused on making what would conventionally be considered music. But now you've moved more onto the everyday life aspect of what you're doing, with street performance. How do you feel about that tension between street performance and the stage? I know you played a gig with Wolf Eyes a year or two ago... Are you still interested in performing in that kind of conventional mode, or are you all about the street now?

I mean, I look at it the same as, you know, what's better, Instagram or Twitter. Twitter or Facebook. Facebook or Snapchat. Snapchat—you know what I'm saying, it's like they're all different modalities, you know. So they all—only when something becomes ineffective as a means of transducing beauty or transducing any kind of communication. When it becomes inefficient, then it can become something I ponder not doing much. I mean, I don't really do as many club gigs as I used to. But that's just because I did clubs for like 20 years. I loved it, you know. And so I still hold that I can actually do that when I feel like it, going into the future. But I don't want to be limited by that, because, you know, it's like, with these different modes, it's very easy for someone to limit themselves into a thing, that I am only a street performer, or I'm only a stage performer, or I'm only a maker. Really, I can be all those things simultaneously, and then something else. So there's no real battle between the street performing construct and the stage performing construct; there is only looking at what street performing has been to me and how can I design the modality to be something that's interesting to me now. But then the same rules apply to, you know, conference appearances, stage performances, concerts, club gigs, hanging around with friends in a space where there isn't a lot of musical activity. You know, being that musical activity, or creating it in that moment for the purpose of that social interaction. There's a lot of ways of looking at what performance is and can be. Same as busking, same as just communicating in general.

So it seems like you're increasingly adding more and more equipment to your sonocyb. You've got the feet, the hands, the headset is coming together... how do you feel about the term cyborg? And do you strive to be able to wear the sonocyb all day, every day, or do you like to remove it sometimes?

Well, I mean, it's like any rules that I come up with are completely arbitrary. I can just make up something, and then abide by it until I don't want to do that anymore. So, I mean, cyborg to me is already a term that's been programmed. To say cyborg—there is already a kind of cyborg

pop culture, a cyborg academic culture, a cyborg medical culture a cyborg social culture, you know, everyone's got smartphones, loads of people got things implanted or attached to their bodies, these kinds of things, and that's all wonderful, and I draw from that, but all my stuff with cyborgs is to kind of diminish what this is. This isn't, like, Terminator movie fandom. This isn't like, hey I'm gonna rip my skin off and there's a metal robot underneath. That's not interesting to me at all, you know. What is interesting is the idea that I can use these 3D printers and these materials to create solutions to things that I just find interesting, you know. I don't have to necessarily wear any of this stuff. You know, so, wearing it, say, for instance, going to sleep in it, is to see if I can actually go to sleep in it. Does it itch? Does it hurt? Does it feel too tight? Does it feel cold or warm? And every time I do that, and if I ask myself the proper questions and get correct answers back, I can change something, and then the next time—you know, when I first started wearing this I could only wear it for maybe four or five hours at a time before it would just start to hurt. But then I refined aspects of the design. And now it's like I just wear it until I feel like not wearing it.

And sometimes I go days without even putting the thing on. So I do like the time when I'm not attached to it, just as much as I like the time that I am embedded in it. So I have times where I don't wear any of this stuff and wear as little clothing as possible, you know, just to chill, as a contrast to being completely enmeshed, literally, in a kind of biomechanical matrix, you know, responding to me and giving me information about what I'm doing. It's an iteration, so it's like, the more I can wear it throughout a day, or in all social situations, the more comfortable it has to become, the more durable it has to become, the more functional it has to become. And so, for me, that's a trajectory that has not been programmed into the cyborg mythos, you know? Cyborgs are programmed, you know, cyborgs in pop culture are the results of some nefarious stunt work or they're Iron Man, and you shoot repulsor beams out of your hands or something like that. You're covered in armor and all of that, or you're like some type of weird second-class citizen race metaphor thing, you know, or,

or, or, that whole trajectory of expression isn't really all that interesting to me. There's a sonic relationship that information can have to the brain that if using a musical concept to kind of hold this meaning, to explore it and to make predictions on what to be and what to do next, is wildly more interesting than any cyborg mythos I've ever seen. So it's not that—"oh, you're a cyborg"—I'm not going to have a philosophical debate with them, unless that's fun in the moment. It's not like every time someone uses the word cyborg I'm just going to fly off the handle—it's not that deep, it's more like that's a template word, like "okay you're a cyborg," and in their minds, these things represent cyborgs, and then if they decide to explore it themselves or ask deeper questions then the term "sonocyb" makes more sense, after that, you know.

AR Right. So, I know you're a fan of Octavia Butler, and her novel *Mind of My Mind* in particular. And you were calling yourself a Patternist, after that book, for a little while.

OA Yeah, haha.

AR Can you tell me a little bit about that?

OA Yeah, her exploration of a kind of telepathic culture was very interesting to me. That when this particular being was born, you know, Mary Larkin, when she came through her transition, telepaths, in *Mind of My Mind*'s universe, they are usually really schizo, and then they go through this transition point where they almost die, and if they don't die then they come through and they manifest a certain type of ability. Sometimes it's telekinesis, sometimes it's healing, sometimes it's telepathy, sometimes it's combinations of those, you know. That kind of thing. And so when she came through, she formed a network with five powerful telepaths. And over time they realized—because telepaths in this universe aren't able to be around each other very much, because they meld into each other and they don't like that, so they instinctively attack each other, right? But in this network they were perfectly capable of interacting with each other and keeping their own individual

autonomy, right? And so they set about the task of finding all of the others that were called "latents." They were the ones that had the potential to be a full-fledged, you know, Patternists. But they had not gone through the transition, so they just stayed in a crazy space. So this whole emerging and evolving technique for finding latents, or, you know, for not holding them to—because a lot of them do really fucked up stuff, because their brains are twisted because they haven't transitioned into their fullest form, and having this process where they were brought through to their fullest form, and harmed someone, maybe, in a previous stage, and, you know, some of them would make amends for that. Some would be crazier, because now they've got power. But some were, you know, they wanted to dedicate themselves to something that was the opposite of what they were before. And so just the way that it was written, the descriptions of these fields that would form when something was about to happen, you know—I found her writing to be very—the description of it was very powerful to me. And so I thought about it in a sono-cybernetic sense, you know, a sense where the network wasn't—it is a kind of telepathy, but it's a telepathy of sound, and sound comprehension, more so than the movie version of telepathy. You know, basically being able to kind of convey what you mean perfectly, because it's not having to be transduced into words. And that transduction is bi-directional.

AR You're really into using open source technology. Do you see what you're doing as part of that Patternist myth, where you're kind of opening up this network where you can share what you're doing with other people, and maybe help other latents, so to speak, come into a state of telepathy? Do you want to share what you're doing? Do you seek for there to be more sonocybernetic Patternists?

OA Yeah, I mean it's an interesting trajectory, mostly because of the investigation, more so than the outcome. I'm not, you know—the outcome changes over time. Before it was all about making the dopiest musical interface ever, and that fueled a lot of things up to a point. And then it's these things, you know, like language structures, and meaning,

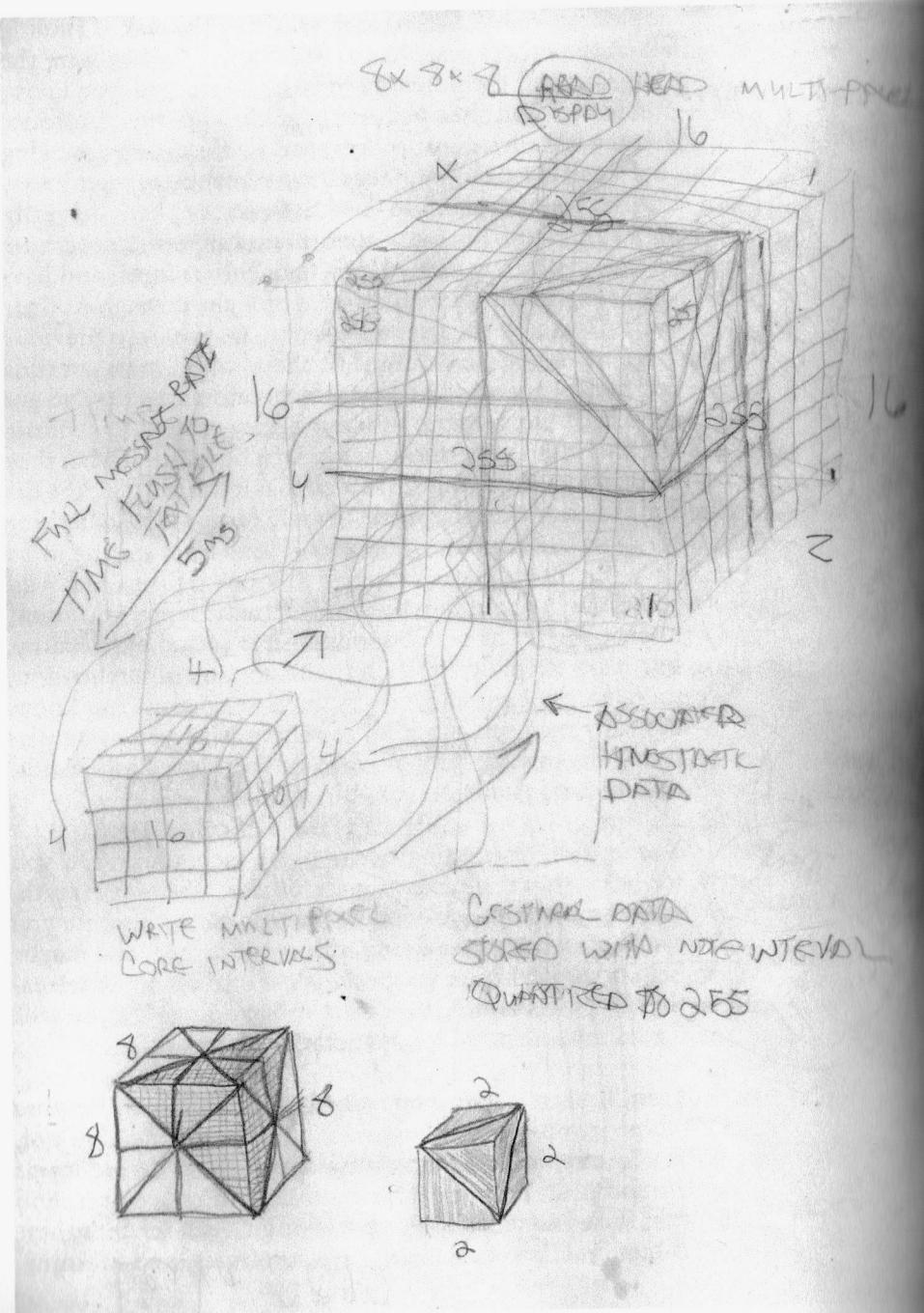


Fig. 12

Page from Onyx Ashanti's notebooks.

and communication—and open source—these things became interesting as a result of that first statement, which was to make this this interface, and make it, you know, make it do certain things, right? Not being locked to an idea because the ideas I had when I started were necessarily simple. And so as time has gone on they've gotten more complex and more interesting, right?

So it's less about trying to help in that way. I don't know, I find that that's a slippery slope, you know? It's like, it ends up with well-meaning yet flawed trajectories. It's like, "oh, I'm gonna help this and help that." No, no, no. I'm more interested in dopeness. I want to make something that's dope. And, you know, and then I'm the arbiter of dope. It's like, somebody else might not think so, and I don't care. So, like, I'm going to consider it being dope in these ways. Like, what is dope in an open source space. Like, just open source philosophy as the presiding thought—what is dope in that space? And I'm not gonna say I have an answer. I like having the question. So it's more—in my mind, it's more about asking the question in such a way that results in dope outcomes, and then sharing those dope outcomes. And then, if someone else wants to explore that that's on them. But if I make it where it's about helping them, now I've put out a premise that's pretentious at best, misinformed at worst. I can't really focus on helping this arbitrary model of another person. You know, that becomes...So then, is helping someone the same as making something that is super dope? You see? But if I do these experiments and I put them on, I inflict them on myself, right? And, over time, the outcomes become more interesting, stranger, more beautiful, or it just jumps into something else completely. Maybe it just jumps straight out of the musical space and into some other space. You know, it's like, for me, these are the trajectories that are the most interesting, and then documenting it properly, so that someone else can say...It's the same way that I go online and I read—I see all these other projects that are doing all these other things and I learn from them, you see. It's not about a project being better or worse than another project; it's about, "oh, okay, I learned this." There's a kid in the Philippines who made a shoe that runs on those lit-

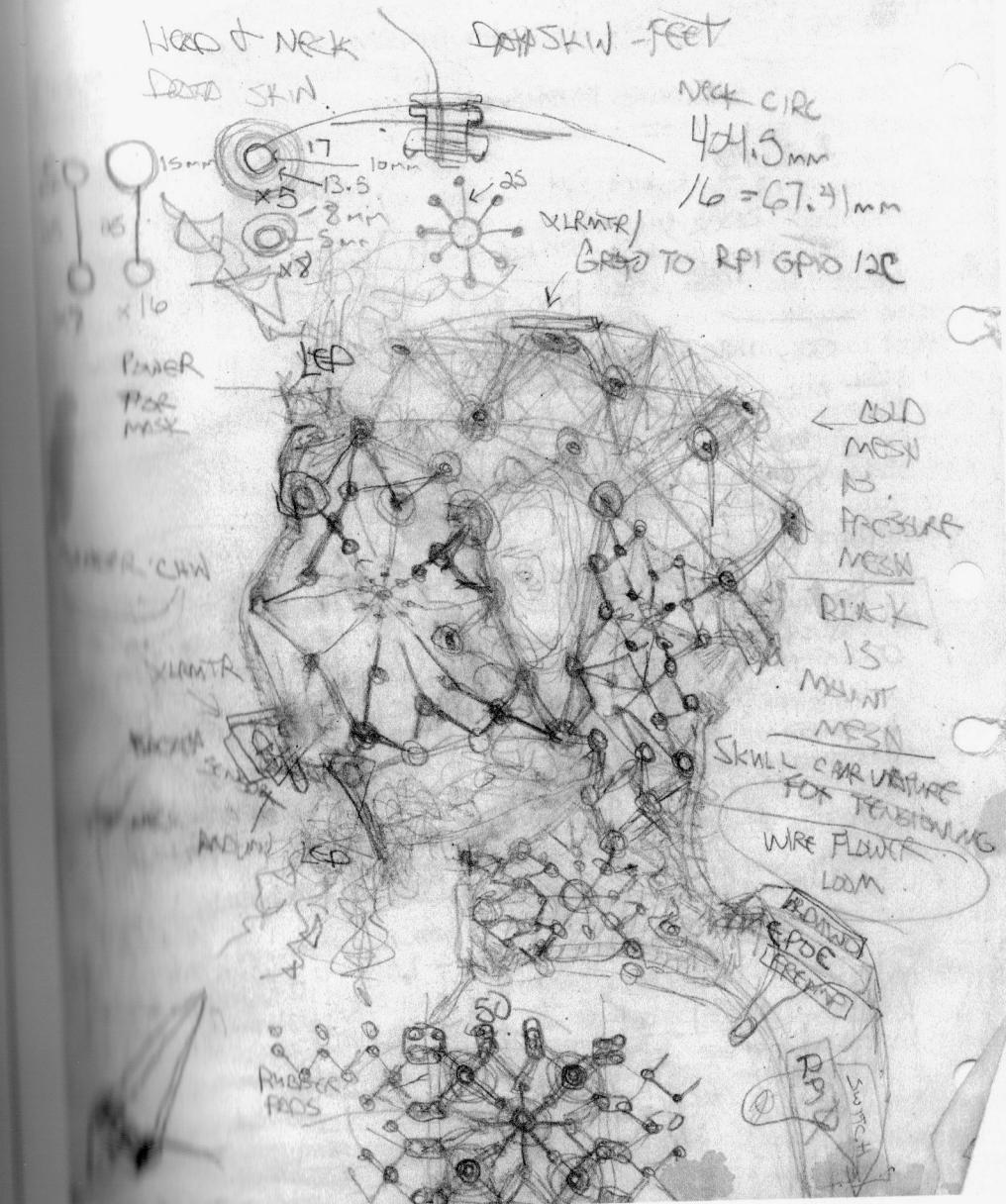
tle piezo discs, you know, that you can make contact mics out of? He showed how you can, like, use those to generate electricity, you know, while you walk, right? Something I'm interested in. I learned that from him, you see. So in my mind it's interesting to make something that maybe that kid says, "oh, that would be interesting in my experiment," and then it's presented in such a way, with a properly done paper and a few other modes of sharing, you know, proper graphics, video, patches, 3D printer files, that kind of thing. Then it becomes interesting, you know what I mean? I mean, does that answer your question at all?

AR

04

Yeah, totally. Regarding openness, how does the visual appearance of the sonocyt play into all of this?

Hmm. Well, you know, it's like, it has to be-like, for instance, with the new face and head system, now I have my head covered in such a way that I have microphones that are picking up my voice, but they're not in the way if I want to eat, or something like that. They don't cover my face. But I do have pieces on my face that are there to anchor the stuff that's on my skull that has the EEG, it has the circuitry for the EEG, there's an Arduino that's doing my stimulation protocol stuff, and then those electrodes. And the IMU, which is for my head orientation, right? So, getting those to be all on the head simultaneously, while also having an aesthetic that integrates them elegantly... efficiently in such a configuration, that it tells a particularly defined truth, you know—It's interesting because I've only just started, I mean, I've been wearing the part that went on the top of my skull for a year. For almost exactly a year. But then as I've added these other pieces to finally anchor the design, now it pulls everything to where it needs to go. So usually, like when I'm around people who are seeing this and me for the first time, it takes a second. At first they don't know what's going on, and then they're like, "oh, okay, I can see his face," you know, there's not like... Everything's little geometric pieces. There's not really anything that is specifically for aesthetics. I think of those things in terms of the color of the material I might be using, but I try to make it about the function, and then



Page from Onyx Ashanti's notebooks.

letting the function have an aesthetic of its own, so it's like... I will pick one aesthetic or function over another, you know, I will pick that. But I try to make sure that it stays about the function so that when you look at it, it doesn't look like cosplay, it doesn't look like I just walked out of a comic book convention. I mean, I do look like that, you know, I mean that's almost inevitable. But there's an aspect of function. There's that first look, and it's like, "oh what's this?" And then that second and third look, you know, tune the eye into the shapes, how they lock together, what's what and why and where and how big is it, was there design consideration put into it, that kind of thing. So it's been been very interesting to wear it in public, and also to make sound in public, you know, in situations where musicians don't really go, like when I go to the grocery store, and so in those moments I like to think and feel, very respectfully, about the space that I'm in, and that it's not all about me, and it's not all about everybody in the store hearing me making weird sounds. That there are emphases that are interesting to kind of bring forth in a moment while I'm reaching for celery or something, you know, to kind of—there can be a sound and that that sound doesn't intrude on someone else's moment that they're having while they're picking their vegetables or whatever. You know, this type of thing, in a space where "music" is not usually part of the equation, unless it's coming out of the speakers from the store itself, and even if it is, this music still integrates with that. So like I said, it's more about the exploration, the questions that get asked, and then answers come out, but then the answers create whole new questions, you know.

AR It's a feedback loop.

OA Yeah, very much.

AR Speaking of feedback, I read some writing that you did about cybernetics and jazz, I think in regards to improvisation, which I really liked. And you, recently—in the past 10 years—you got really into free jazz, right?

OA A little bit, yeah. I mean, I really got into it from the perspective of other musicians, more so than from my own output. My output, I don't know, I wouldn't call my output free jazz. But I would say that it might be inspired by some of the same things that would inspire someone else to do when it was a completely new form, you know, that point you get in your musical trajectory where you've done all the preexist—the other patterns, and now you want to kind of expand beyond the limitations of those patterns, when you go into this avant-garde free space. I would say that maybe some of the same inspirations have led to some of my own explorations, but as far as a genre, I have enjoyed listening to other musicians explore that. Especially in the context of listening to some of their earlier stuff. I mean, really, most free jazz people, they have earlier stuff, they have stuff that was like their R&B stuff, or their wedding stuff, or their gigging with other jazz musicians stuff. Yeah. And then they have their personal thing. And then eventually those things mesh.

AR So what was your straight thing before the personal thing? What did you come up doing before you decided to go your own style of "free"?

OA Well, I started out with like R&B and contemporary jazz, you know, Kirk Whalum, Gerald Albright, all that stuff from the late '80s through the early '90s, before it turned to easy listening. There was a time when it was called contemporary jazz, and then there was a time when it was called easy listening, and easy listening was kind of like the death, in my estimation. And so I had that faith, and then I just couldn't do it anymore. I mean, I did that for years, you know, and so eventually I was like, "okay, I can't play cover tunes anymore." So I started doing my own stuff and that was drum and bass. So I went straight into like dance music type stuff. But it was still jazz. That's where the beatjazz stuff came from. So that was my more accessible, clubby, you know, be able to go to the gig and play this and people are going to be happy, because it fits within these genre spaces. So that was a thing. And that was a thing for a long time, too. That was a thing for, like,

I don't know, let's see, at least 10 years. Like, a solid 10 years, right? So, around 2010—no, actually, no, I take that back. Even after I built my first beatjazz controller, I still stayed within—I just had more options, but I stayed within this beatjazz space. It was still very much beatjazz. So that was the beatjazz controller and it was very groovy and I could play clubs and play gigs and play with DJs, all of that kind of stuff. And be the DJ. But there was a point where I was realizing there was a lot of stuff that I couldn't do, even with this new system, and it made me start investigating, you know, really upping the granularity, so that I have more notes, I have more intervals to play with, I have more vectors that I can modify sound streams, that kind of thing. So that was probably—well actually, I think that I really vectored out of that space and into the more abstract space when I stopped using commercial VSTs, when I stopped using all my VST plug-ins, and Ableton, and FruityLoops—I was more of a FruityLoops person, for a long time. I was FruityLoops for 10 years. And so once I stopped using commercial software, and I just, you know, doubled down on Pure Data, that's when it got abstract.

AR Cool. So you're living in Detroit now. Reading the Patternist stuff, especially *Wild Seed*, I was struck by similarities to the Drexciya myth.

OA Mmhm.

AR You know, how Drexciya is an underwater country populated by the unborn children of African women who were thrown off slave ships.

OA Yeah.

AR Do you feel an affinity with that whole Detroit techno-via-jazz scene, living out there?

OA Yeah, the Underground Resistance guys are like—or, I mean, you know, techno, Detroit techno, and its culture and its history here were big reasons why I came here. I wanted to know about—I wanted to meet them, and I also

wanted to know about the culture that produced them, you know, it's very—you know, they're doing a lot of really interesting stuff, and they have events at their place, and every once in a while they invite me, and we all hang out and whatnot, really cool cats.

