

Music and the Narrative Basis of Everything

By Andrew Massey

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Pre-Preamble:

I am heartbroken that I am not in Denver. Complicated schedules defeated me, and I could not get there in time for my presentation. So I am posting it as swiftly as possible.

I already knew that this topic was bigger than I could fully encompass in a single session, so what you see here is my first posting of the talk. It covers the ground I expected to be able to deal with in my time slot, had I been there. But there is MUCH MORE - and the more startling parts are still to come. - The crucial section about Sex!

So since I am not there in Denver, partying, I shall knuckle down and get the remaining sections completed as quickly as possible, posting each part as I complete it, and reposting sections as I revise them. I shall also post it all as a podcast as soon as I figure out exactly how to do that. I shall create a Blog of this too, so that you can post comments.

So please return to this: I shall be updating it constantly as I complete more of my explosively expanding system.

I grovel and weep, but wish you all well, as I type away in my little hovel.

Have a great conference, Yours in humiliation, Andrew Massey.

Preamble

Good afternoon, Ladies and Gentlemen. I chose as my title for this talk – “Music and the narrative basis of everything.” I wanted my topic to seem a bit obscure since, when the deadline for the title came around, I was by no means

sure what I was going to be saying. But the blurb in the schedule book gives a better idea. My thought is that music has a sort of narrative quality to it, in that it evolves over time, and can seem consistent, or disjointed, convincing or disorganized, much in the way that all these things can be true of a story. Yet music is not about anything. I went into some detail about that last time I was at the UPA conference, (you can see that speech [here](#)) and will try to overlap as little as possible. Suffice to say, for now, that although people often instinctively insist that music IS about something, it is not very good at it. Yet some sort of similarity between music and language is difficult to deny. So, I thought, if storytelling is done using language for the most part, and people I have talked to over the years seem to get most upset when I explain that music is not a language, and since music in many ways feels like language and seems to have a shape much like a story does, then maybe by looking at music, we can deduce some of the deeper facts and principles that apply to storytelling, and which are quite independent of what any given story happens to be about.

Part One - Narrative as a human thingie.

Human beings are the only animals that tell stories. So we are, as far as we know, the only entity in the universe that tells stories. Storytelling, therefore,

must be deeply involved with that it is to be human. I want to explore some aspects of the human predicament that gave rise to storytelling, in order to try to find out what it is for, and what it can accomplish. My hope is that this might reveal some features that make for good, effective, and engaging stories, and even some of the things that, surprisingly, stories are not good for.

I used the word “narrative” in my title rather than storytelling, and there is a difference between these two ideas. Storytelling implies something made up, something not true, but constructed so that to some degree it possibly could be true. Narrative, on the other hand, *could* be imaginary, or could be an account of what really happened over a period of time. It could be reportage, for instance. So “narrative” is the more inclusive term, and it is the term I shall start with.

First definition

Narration is the interface between knowledge and ignorance.

A narrative is used to expound knowledge. When we know something well, such as the plumbing system of this building, Shakespeare’s Hamlet, or

the English language, we have it, as it were, in random access memory. We can flit around, in our minds, among the constituent parts quite easily: Who was Polonius? Why did Ophelia die? When do we use the “ing” suffix? No problem. You can access your knowledge straight away, and bring to mind instantly what each of these issues is, and how it relates to things closely connected to it, and to the entire topic: where Polonius fits in with Shakespeare’s commentator characters, for instance, or the degree to which English uses suffixes for inflection.

Another example: If you fully understand some software you have designed and debugged, then you can mentally jump about in the hierarchy, knowing what is where and how the parts work together. At least you can if you kept good notes. So knowledge is structural perception. It is random access, and, like space, you can move around in it in three dimensions, coming back to a place you visited before if necessary, the things in it having complex multiple relationships.

Ignorance does not have that structure on which to hang the parts. So each item must be introduced together with the connective tissue that surrounds it and explains its place in the as yet incompletely perceived structure.

Unlike random access knowledge, a narration is serial, and proceeds one item at a time, always connecting each new item to previous ones, and setting up an explanation, a context, for things to come. Where structural knowledge can move as if free in space, a narrative is constrained in one dimension, just like moving through time, which, usually, a narrative in fact does.

So again, narrative is the nexus between knowledge and ignorance, | or between the knower and the not yet knowing. Consider, as an analogy, a blood transfusion. The blood amorphously waiting in the bag has to pass through the tube and the IV needle in a very thin stream, to enter the patient where it may again diffuse itself into the wider structure of the receiving body.

The body can only accept one thin stream, a little bit at a time. And we, listening to a narrative, can only hear one word at a time. The whole picture of the world has to enter our ears one concept at a time.

Narrative is serial.

Understanding is always retrospective.

A Boeing 747 is a complicated structure, and all the bits of it have to exist at the same time, and be correctly connected. But to build it, the complexity has to be turned into a serial sequence of steps, a narrative, that when followed,

results in the existence of a new plane. It can be a set of parallel narratives, of course, but these then have to be controlled by an overall master-narrative that synchronizes them. An algorithm is a narrative prescription for achieving some probably complex goal.

What we are talking about for the most part, though, especially in storytelling, is the use of language. Most narrative therefore, is a case of someone who knows talking to those who do not know, in such a way that they can come to know. Knowledge is dismantled in the mind of the storyteller, fed as a narrative stream to the hearer, who is then able to reconstruct knowledge inside their own mind.

Variations on Narrative as a Serial Bus for Knowledge.

There are also a few little variations on this that I should mention. Sometimes a narrator deliberately exploits and enhances ignorance for the fun of it, and the listener goes along with the ploy willingly, as in a mystery novel or a whodunit. The whole point of reading Agatha Christie, for instance, is that you do NOT know, and she is trying to confuse you, and test your skill at deriving knowledge from her narrative. But there is also a bit of structural knowledge that you and she share. You know ahead of time that she will not

cheat – the clues will be there somewhere, and misleading information will eventually be shown to be irrelevant. Once you know who did it, there is little point in reading the book again. Narrative actually requires ignorance, else it leads quickly to boredom. And indeed its usual purpose is to dispel ignorance and create knowledge. What this amounts to is that the chief goal of a narrative is to render itself unnecessary. Still, the deal you made with Agatha Christie about the rules of whodunits shows that no narrative can impart *all* knowledge. No narrative can work in the absence of at least *some* shared structural agreements. It cannot be the beginning. At bottom, we have to have our shared, genetically inherited humanity. There is not much point in explaining calculus to a toad, or reciting a poem to a cockroach. We can never start at the beginning.

There is a very important exception to the business of a narrative or a story working to make itself unnecessary. It is when the narrative itself is the structure it is trying to inform us about. Any parent knows the experience of reading a bedtime story to a child who, once it is over, immediately cries out “Again!”, and demands to hear “Goodnight Moon” or “The cat in the Hat” all the way through again, word for word identical to the previous reading. Not only that, but a great way to tease a child is to change the occasional word. “No! That’s not right!” the child will insist, and urgently need you to accept the

correction and go back to exactly the way they have it memorized. I loved doing that with my kids, it gave them such a sense of power and control to know immediately the difference between what they heard and what they should have heard. Exactly the same thing as listening to a piece of music you know well and cringing at a wrong note.

The purpose of *this* use of narrative is memorization rather than understanding. And this is a very important form of knowledge too, as in learning the vocabulary of a language, memorizing a piece of music, getting to be familiar with the layout of this building, etc. In these cases, there is no complex, inter-related logic to explain, sustain, and predict all the components of the structure, at least none that really matter. In these cases, understanding and integration is neither necessary nor possible – sheer data are all that you need.

The best sort of knowledge for mastery of anything is a combination of both. Instantaneous recall of details without having to figure it out, PLUS an understanding that lets you reconstruct details that might be forgotten, or correct errors that might arise. Music is serial; it is intrinsically narrative. And you have to learn it to play it serially, of course. There is no other way. Yet memorizing music as a stream of events is lethal – disastrous. As soon as there is a slip of

memory, or someone else's error, or a distraction – you are lost. A lapse of memory can leave you stranded without a clue what to do. So, strangely, to be able to be a narrator, a musician, you **MUST** have that timeless structural knowledge from which the story flows, just as a storyteller must know the story, not just the chain of words.

The last variant on the use of narrative I want to mention is when you figure out for yourself how something works. Getting to find the controls in a rental car, getting around the menus in Photoshop, figuring out why the rice burned. All these things involve figuring out what happens if I do this or that, or what I must do to stop the other thing from happening. All little stories we tell ourselves, and no-one else, unless they need us to, in order to increase the compass of our knowledge of the world.

Narration explains, and thus builds knowledge. It is the ladder we can throw away once we are on the roof.

Part Two - from what did Narration Evolve?

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What I have described so far is what a narrative is to us today, and what we use it for. But now I want to dig a little deeper and take some steps

backward to look at this from an evolutionary point of view. This will reveal some surprising things about the strengths and weaknesses of narratives and storytelling, and hidden powers hiding in these normal, everyday activities.

I am afraid most of my talk will be a chain of digressions. That is the only method I can think of to draw a few somewhat unfamiliar ideas into the flow of my narrative. So here goes:

First Digression: Origins and Essences.

The origin of something is not the same as its essence. The way it started is not the same thing as what it is. There is no “true nature” to be found by going back to original intent, as it were. Things get adapted for new purposes. Our hands used to be feet. That doesn’t mean that they are feet really. They are mainly manipulative devices now. But they *do* bear the heritage of their ancient footishness – they have the same bone structure and can be used to bear weight and to propel.

Most modern fish have what are called swim-bladders. These are bladders filled with air or another gas that controls the fish’s buoyancy, enabling it to swim easily without fear of sinking or floating to the surface. Sharks don’t have these, which is why they have to keep swimming. Surprisingly, these evolved

from lungs – yes, the ancient evolutionary ancestors of modern fish had *lungs* as well as gills, before they had swim-bladders. That does not mean that the bladders are lungs *really*, but they are sometimes filled by gulping down air, and can even be used to get extra oxygen, and so on. They are not lungs anymore, but the origin has bestowed a great deal of specific anatomy and capability on these changed organs.

Again, everybody who has ever studied harmony has had it drummed into them that harmony arose because of counterpoint. That is to say, chords arose and were discovered because of several melodies sounding at the same time. So it is frequently claimed that the justification for the notes in a chord can only be understood in terms of the melodic origin. But that is not true. That may be how chords were discovered, but they now function as independent entities with specific musical meaning, even if they do retain vestiges of melodic imperatives.

My point is this. Things are what they are, and are used for the purposes they appear to be used for. But finding out where they came from sometimes reveals strange inadequacies, or unexpected capabilities that seem odd in terms of current use. Since we are, obviously, very familiar with the way we use

things, we often overlook oddnesses until we see how they came to us as part of a package deal from our distant past.

End of digression on Origins and Essences.

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Precursors of Language. The common ancestor of language and music.

Narratives and Stories are mainly accomplished by using language. So I want to take a peek back in time to speculate about the origins of language, what it was for, and why we needed it, when other animals seem to get by just fine without it.

Over many years, in talks like these, I have made a big issue out of the fact that Music is not a language. I still assert that, and think acknowledging that fact is a crucial step to understanding how music works and what it does. To think of music as a universal language, a language of feeling, etc., is a poor metaphor only. The simple difference is this: music has no semantics – it has no vocabulary, or, at least, no vocabulary of the sort that language has; which is to say specific and arbitrary vocabulary. Music doesn't refer to anything. Now if you find yourself already resisting what I am saying, do not worry, as I am not going to belabor the point today. In fact, I am going to swing a long way to

meeting you. I would just point out that, to make my assertion clear, that a command like “Send in your income tax return before April 15th” can be translated into French, Greek, or Esperanto, but it cannot be translated into music. In that simple test music fails because it is not a language. It doesn’t have the capability to function as one.

But recently I have been thinking about the intensity of the opposition I encounter to the, to me, very simple observation about this crucial difference between music and language. I find myself giving no ground logically, but sympathizing somewhat with the protesters. There is certainly a lot about music that *feels* like a language. It has this narrative ebb and flow that we are talking about all this week – it gets our attention in a similar way – it can be interesting or dull in much the same way. And, above all, it seems to *mean* something even if we cannot say what. It seems to speak the truth, and a melody feels very much as if it is talking to us.

The argument about music and language has been going on for centuries, with platitudes like “music starts where words leave off” and Mendelssohn saying that music is not too vague, but too specific for words.

So then the simple solution struck me. Music is not a form of language; language is a particular adaptation of music. Or, as the evolutionary scientist would put it, language and music have a concestor – a common ancestor – something out of which they both grew. Looking at it as a matter of animal evolution, it is obviously true. Trivial almost. Charles Darwin said as much in *The Descent of Man*. (To my intense annoyance. I thought I had come up with this brilliant insight, and then found Darwin had nailed it in 150 years ago!) Our music, human music, arose from song. It is all a huge elaboration of using our voices to indicate how we feel, (bearing in mind my warning about origins and essences.) I am not saying that that is what complex music is *now*, but that is how it started. If we call that communicative use of sound “proto-music”, then it is still all around us in the animal kingdom. Bird song is definitely music, no “proto” needed. I am sure I don’t need to go to great lengths to convince you of the musical nature of birdsong – and if anyone is tempted to say the birds are just using territorial signals or advertising sexual availability, then I remind you again not to confuse origin with essence. The song of the nightingale may still be a personal ad asking for sex, but it is music too, with invention, variation, creativity, joy, and beauty. And anyway, WE use music to try to get sex all the time. It is not unusual for something to be two things at once. An evening at a

restaurant may be a way to avoid starvation, but it is so much more than that as well.

To hear a pack of coyotes in the woods of Vermont is to hear an extraordinary choir singing in close harmony. The rhythmic chants of the Great Grey Owl, the swell and fade of the cicadas. This is the stuff of music even now, - not the actual performers, but the morphology of the sound, rising and falling.

The trouble with the owl hoots we hear at my house in Vermont is that we never believe it. It sounds so exactly like a human pretending to be an owl. The musical refinement of these animal sounds is all the clearer when you think of all the animals that are not good musicians. Crows and bears, for instance, are not winning many auditions. They say that birds are descended from dinosaurs. If so, I'll bet Tyrannosaurus Rex sounded just like Luciano Pavarotti.

These vocalizations are the original stuff of music even now, and clearly they evolved and were in use millions of years before any hint of language emerged. We ourselves used our voices in pre-linguistic fashion to cry out in fear and pain and to indicate our emotional states, and then eventually used that same equipment to make words and to speak. The similarities and overlaps are

astounding. This is the usefulness of seeking origins – most of the time in thinking about language we don't really pay much attention to what it *sounds* like. We focus on what it means, and the structures of meaning hidden at lower levels. Since writing was invented, there does not even need to be *any* sound involved in language – or at least nothing more than imagined sound. But consider this: to get language, all you have to do is to take music, and then assign highly specific denotations – meanings – external references – to specific sounds. Sounds that mean things, not intrinsically, but as conventional signs, and you have at least proto-language.

Example – let's agree that when I sing Beethoven's 5th, it is a request for you to lift up your left arm. Any other tune means don't. Here we go:

(Had I been there, I would have hummed at this point: eine kleine nachtmusick, Danny Boy, Beethoven 5 – Beethoven 9. - and you would all have raised your hands at the right moment.)

You see – music plus denotation makes as good a source of sign material as you could want, *and* it already has emotional communication built into it. A lot can be said without actual words being discerned – or in which the words themselves are unimportant. There is the famous sentence with syntax but no vocabulary uttered by the man using a power drill that has broken – “Fuck! The

fucking fucker's fucking fucked!" There's the spelling bee contestant taking a good spirited attitude to a truly bizarre word.

“please spell squogglisticisms”

“OK?”

(Had I been there, I would have said this aloud with that curious upturn of voice (the O going down, the K going up) which clearly means “Well, you are the official, so I suppose it must be a real word, but it sounds pretty unlikely to me. Oh well, I’ll it a shot as if I were not suspicious.)

Both of these use language to a tiny, almost absent degree, and the substance of the communication comes entirely from the proto-linguistic components, that are also part of proto-music. Vocabulary grants specificity of meaning. In these two cases, no specificity is called for, but the situation of the speaker is clearly communicated, and their attitude to the problem that they face, and in some considerable detail too.

Adaptation of music to provide vocabulary.

So, to make language, you need sounds and meaning. It isn't easy to assign meanings to highly developed musical sounds, like a particular note for instance, for reasons to do with the way the human ear and brain work, but you don't have to make huge changes. You just have to choose sounds that can be

recognized absolutely rather than relatively. Melody and harmony depend upon the relationship of one sound to another rather than the actual identity of the sound. – intervals, chords, that sort of stuff. And since most of us do not have perfect pitch, choosing notes as symbols does not work reliably. It is possible, I suppose, that there are some animals that do have perfect pitch, and they might have a language that assigns symbolic meaning to particular notes, micro tones perhaps, in which case they could chat away merrily without humans figuring it out at all.

We humans choose different ways of identifying sound symbols. Instrumental sonorities are created by overtones, vowel sounds are created by things called formants, which are related but rather different. The details do not matter for the moment, except that overtone emphasis works well for melody, and formant emphasis works well for vowel recognition. Some languages, such as Chinese, actually do use particular *notes* to add meaning, adding to the clear identity of the roots of music and language, and leading to wonderful jokes about gaffs made by people who are not used to tonal languages.

The mistake of thinking that music is a language.

So language and music are very close after all, it's just that when talking about music we tend to over-estimate the importance of the similarity, and when talking about language we underestimate it.

memorable aphorism.

There's not much language in music, but there's a heck of a lot of music in language.

The uses of proto-music, proto-language.

So what are the uses and purposes that, back in the time of the language/music common ancestor, caused music and language both to develop? Well – the obvious things: – using your voice as a means of expression first, then communication, then persuasion and manipulation.

I shall come back to the importance of the musical rules and structures underlying language after my next digression. But I need to make digression number 2 now.

Digression 2 – the four layered brain.

To oversimplify terribly but usefully, our brains and nervous systems have four reasonably distinct layers, which evolved in the following order.

1 The first layer is that of cellular and organ processes, things that we do not need to be conscious of at all – things such as liver activity, kidneys, *digestion*, heartbeat, background breathing, and so on. These processes are essential for survival, but are things we do not need to be conscious of at all. They are processes carried out almost entirely inside our skin. They are internal processes that are controlled within the body.

Layer 2, sometimes called the reptilian brain or the limbic system, is to control basic and crucial processes and activities which *do* require some conscious volition on the part of the whole organism to be carried out. We can digest without awareness, but eating needs more co-ordinated action by the whole body, and so does excreting. Not absolutely essential, but highly preferable. These are the activities that require the organism as a whole to interact with the environment – eating it- - crapping on it, etc. The conscious drives that marshal all the resources of the body to do these things are what I call, for today's purposes, URGES. They are much the same as instincts, but a

bit more imperative. These are the most powerful promptings to action that we have – the urges to eat, drink, copulate, sleep, flee, etc. There is not much wisdom involved here, hence the phrases “blind instinct”, “raging hormones” etc. But they are a bit more voluntary than the PROCESSES, of layer 1.

Processes happen even without our permission, as it were. Urges need our cooperation, but won't be denied. You simply *cannot* kill yourself by holding your breath. Also we can be pretty sure that advocating nothing but abstinence is not going to stamp out sexual intercourse.

Layer 3, a quite distinct layer of the neo-cortex that evolved on top of the reptilian brain is the brain of the EMOTIONS, the mammalian brain. The main function of the emotions, I humbly conjecture, is to tip the scales of the balance one way or another when it comes to choosing between possible ways of satisfying our urges. You have to eat, but what will you eat? The urge to eat gets you to the restaurant, but then your emotions take over as you look over the menu. What will you eat? You eat what you like best, what makes you happy, the dish you have warm memories of, or that creates eager excited anticipation.

As a living breathing passionate human being you have to copulate, but with whom? Look to your emotions and go for the one you really fall for. You

have the power to attack, but should you use it? Only if you really hate someone or fear them. That is sufficient stimulus.

Emotions are weaker than urges, but more intelligent. Emotions discriminate, are based on both experience and inherited preferences and talents, and represent the beginning of wisdom. They have tremendous sway over what we do, though they cannot overrule what we *have* to do. They cannot stop what we *must* do, but *can* make us feel we must do something that really isn't necessary. Like invading Iraq, for instance.

Lastly comes layer 4, the purely human linguistic, thinking, rational brain. This is the weakest of all four layers, though the most potent in its consequences. It is the thinking brain that can construct an atom bomb, an AK47, a means for distributing botulinus toxin, a way to print and distribute books of wisdom, and that forms and organizes a Usability Professionals Association.

So in terms of potential power, and strength of control over decision making, we have:

- 1 Processes – in Command the strongest – what they control happens anyway. In potential the weakest, as they only operate inside the skin.

2 Urges – in Command a little weaker – they have to wait for the whole body to co-operate. In potential, stronger, as they *do* get the whole organism to effectively interact with the world outside the body.

3 Emotions – In command weaker still – they make recommendations and indicate preferences among possible actions. In potential, quite a bit stronger, as they cause people to do completely unnecessary things, and focus attention on particular targets, and get whole groups of people to act together, taking action up to the social level.

4 Rationality, intellect. In command the weakest, because rationality tries to reign in emotion, based on knowledge, most of which it does not yet have (because it has not heard the narratives!!) making it a little uncertain and unconvincing. That's why we have to go to school. The intellect strives to understand new and unique things, and thereby inform and guide the emotions. It believes it is more sensible and wise than the emotions, and that emotions will obey it, so that they will thereby have control over the urges, and be able to establish a benign regime of reason, which will in turn be best for the processes – a safe and healthy life.

However, it is the newest part of the brain, and the one that tries to take its cue entirely from outside of the body, which is very hard to do, so it has *way* less control over the emotions than it thinks that it does. Therefore, most of the time, what we really use it for is rationalization. – Constructing logical, rational explanations to justify the conclusion that the emotions are right, and that the best course of action is what we were going to do anyway. We deceive ourselves terribly.

End of digression on the four-stage brain.

It is the fourth part of the brain, the rational brain, that developed and uses language, even though, obviously, all four stages of brain are involved in everything we do, all interacting with each other. There is no rational “self” that sits high above all the lower feelings. And not only is this rational mind the weakest of all four in terms of its power over our actions, but I shall soon come to another reason why it has less power than we think it does, and another reason not to trust it. (*This startling revelation comes at the end of the “sex” section, which I shall be writing later today.*) For the moment, just notice that we use language to formulate arguments, reasons, analyses, recommendations for action.

Poor delusional rationality.

All these are cast in the form of language initially, usually as narratives. But notice this; we have already seen that language is *mostly* music, and music is the product of the emotional brain. So although reason is built on top of emotion, it only adds a veneer to the emotional basis. Language is “meaning” hitching a ride on top of a swirling flow of emotional music. It is hardly surprising that we are all so very much less in control of our own lives than we think we ought to be. We all have this towering intellect, yet we fail to control our weight, we keep marrying the wrong people, we go to college and neglect to study. The intellect does not control us as we think it does, it does not control us in the way we claim it does when we want to impress our bosses, nor in that way that, when acting AS bosses, we insist that it can and must. The seething undercurrents of emotion drag us off in service to our urges, while we meekly bleat “No problem! This was what I meant to do all along.”

To emphasize how big a mistake it is to think that our rational linguistic lives – the narratives we tell ourselves about ourselves – to show how far from reality these are, I would like to examine a little more closely the similarity between music and language, and how either of them relates to reality.

The Musical Inheritance of Language.

What are the characteristics of proto-music that were inherited by language? Proto-music being the use of our mouths, larynxes and lungs to express and communicate our inner states, especially our urges, processes, and emotions, such as desire, pain, love and hate. I have a list of 6 characteristics common to music and language.

* *Breathing*

- The need to breathe divides music into phrases. A melodic phrase is about the length in time that can be sustained by a lungful of air. This characteristic has been inherited by the more complex instrumental music of recent centuries. Music doesn't really work well unless it naturally divides itself into melodic phrases.
- Language is similarly structured into sentences of comparable length. The length of a sentence is fairly closely related to the practicalities of lung capacity breaking language up into units too. And this sentence structure has been inherited by modern language – even when it has been transformed into written form, and lungs

are no more of an issue for language now, than they are for the flow of piano music.

✱ *Continuity and consistency.*

- Music needs a certain similarity and continuity of sound in order to make any sort of sense. It is the relationship between similar things, instruments playing in tune, for instance, that gives meaning to music.
- Language needs to keep to the point, to maintain the topic throughout a grammatical structure, logical coherence, staying with related topics.

✱ *Points of emphasis.*

- Music comes in cadenced phrases, building to and from some central point of emphasis – marches tend to be downbeat music, with the emphasis right at the beginning. Waltzes tend to be upbeat, with each phrase leading into an emphasis, like in the Blue Danube. Music flows to and from the note of emphasis, in what we call the melodic arc.

- Language also focuses each comprehensible sentence around some crucial word. Often, but not always the verb, or else the most surprising word. In most languages, even each polysyllabic word has an ebb and flow of stress and subordination. Poetry makes huge use of emphasis to define meter, which is rhythm, and uses rhyme, assonance, alliteration, all entirely musical devices, to create cross references and extra emphases and relationships between specific words. Poetry is language seeking to regain its musical ancestry, though not necessarily, of course, for musical reasons. It is sometimes, as in Dylan Thomas or Gerard Manley Hopkins, but in more cerebral poets such as Auden or Eliot, meter and rhyme are used to give a specific gravitas to the meaning, and to point out connections between words not connected specifically by the syntax of language.

* *Plausibility*

- Music needs to depict, represent, or create, some plausible flow of emotional unfolding – the psychological progress has to be convincing. Music fails if it goes on too long, or doesn't go on long enough, or has misshapen phrases.

- Language too has to speak of the possible and the plausible. It has to make sense and have plausibility, or some sort of coherent meaning – what Stephen Colbert calls “truthiness”.

* *Progress*

- To be interesting, music has to have a sense of progress, creating a desire to hear more.
- In language, a narrative, a story, has to have a sense of suspense, making you want to hear more, and find out what happens next.

* *Completeness.*

- Music must come to an emotionally and aesthetically satisfying end, wrapping up all in resolution. Somehow, you have to be able to tell when it is over.
- Language must be grammatically complete, and the talk and conversation must come to some sort of a close, - or, if not, then clearly not.

End of list.

So we can see that there are many features that are perfectly natural to music, and seem to us almost inescapable in a musical context, at least in the music that has evolved alongside us. And many of these features seem also to be deeply ingrained in language, even though, since language is a string of symbols and structured meanings used to depict the world, there does not seem to be any very strong reason why this should be the case. The function of language as a reality handler does not quickly suggest why all this music should be built in.

Language as a mirror of reality?

We think of language as a mirror of reality – it is the tool we use to identify and tell each other about things that really are out there. Wittgenstein, in his Tractatus, talks about sentences and propositions as being pictures of reality.

But how like reality is language?

Going back over my six points of similarity between music and language:

- Reality is not broken up into breath-length chunks. The world is not constructed out of sentence-shaped facts. It is continuous and endless.
- Reality can juxtapose totally unrelated things and substances. There is no necessary coherence in the world out there, merely stasis, continuity, and rupture.
- Reality does not emphasize little bits of itself in a hierarchical sequence. All of it is just there.
- Reality is not concerned with plausibility, since it is non-representational. It either is, or it isn't.
- There is no dramatic progress in reality. It is a continuous non-purposeful unfolding, started long before we were born, and continuing long after we shall be dead.
- Reality does not wrap things up in a nice conclusion. It keeps on going.
-

So we can see that language, even the things that language tells us, the content of language, is not remotely like reality, even though it may be the only

thing that we have and can use to get a handle on reality. Unlike reality, it is remarkably like music, and shaped like the internal flow of our urges, our emotions, and, of course, our ideas. So why do we use it, and what does it accomplish?

Important Aphorism - preliminary conclusion.

Language is the tool we use to interpret the world out there as if it were a part of our own body, or at least a member of our tribe.

Conclusion to part two

So the nature of language itself, its ancient musical baggage, leads to animism, to anthropomorphizing, assigning human qualities to inanimate nature, assuming that everything has a purpose, an intention, a view to the future just like we do – seeing spirits behind the rainbow, purpose and anger behind the hurricane. And then, when we grow up and learn that none of this is so, our musical/emotional language lets us retreat into monotheism and similar religions, providing some invisible guarantee that the senseless universe is still, at bottom, one of us. If we die, it was our time. If we live, it was God's wish.

Wait, there's more!!!!!!!

Dear UPA friends:

This was about as far as I expected to be able to go in my actual physically-present presentation, but there is, as they say “much much more!” In particular the following major digressions are in store:

- Sex – and how sex is the key to our body shape and our intelligence, and how sex triggered the invention of the entire world of the imagination. (I was a bit nervous about delivering this part at the conference. It is really interesting, and absolutely central to my argument, and the conclusions are quite startling, but it would have required me to stand up in public talking about, among other things, penis size, which might have been a bit odd.)
- Controlling people. – How we learn to control the world, which mainly consists of things. We then go on to try to

control other people as if they were things too. But they aren't, and they kick back, which leads to a sort of control/arms race.

- The techniques of control in an inanimate, causal, probably deterministic universe.
- Immanuel Kant, and the inaccessibility of the real world to our minds. Not a problem; in fact the basis of our freedom.
- The role of consciousness in the creation of free will.
- A expansion of the definition of entropy to restore the arrow of time to the world of physics. - Reduction, Emergence, and Structured Causality.
- Conscious manipulation of the world making the future the cause of the past.
- The central role of narrative and storytelling in making all the possible.
- Conclusion.

I'll keep posting, and in the end you'll get a lot more than you would have done if I were actually there.

Andrew. 10:10 AM on Wednesday June 14 2006.