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One Way Street

Two friends walking down a city riverside street.

Japa : That cafe is playing my favorite new song. I've been looking for a reason to pick a spot and sit. Look good?

Aben : Sure, looks inviting, got time to kill.

The two sit down Japa begins bobbing knee to the rhythm, the song is gentle and soft, just loud enough to enjoy without impeding conversation

Japa : I love this song, like a warm golden sunrise, you know?

Aben : Sure... Well... actually, not really, but it is a very relaxing song.

Japa : Huh? Well, what does it feel like to you?

Aben : Uh... Relaxing and peaceful I guess

Japa : If you don't like it just say so haha, it's not like it's my song.

Aben : No no, it's great.

Japa : You never really talk much about music but you are always listening to it with those ear buds of yours.

Aben : Oh, I love music. I probably just love it for different reasons than you.

Japa : Elaborate.

Aben : Well, for me it's a powerful mood regulator, the way it can lift my spirits, amplify happiness or soften sadness. It can drown out the noise of life, keep my mind from daydreaming, kind of anchor me by giving me constant background stimulus. It gives me some agency over my state of mind and control of my imagination's tendency to wander.

Japa : So you DO feel the music?

Aben : Yes, of course, just not the way you describe it.

Japa : How do I describe it?

Aben : With visuals.

Japa : Try closing your eyes, relax and listen to the music.

Aben snickers

Aben : It's not like I haven't tried that. So many people talk about seeing music, there are tons of audio visualization programs and other stuff out there, just none of it really clicks for me.

Japa : You are the first person I have heard that from. What do you think of music videos?

Aben : Oh, I love them. Don't get me wrong, I can appreciate the beauty of music videos and visualizations.

Japa : So after seeing a music video, does it come to mind later when you hear the song again?

Aben : Not really. Not unless I actively try to remember it. The music doesn't trigger visuals by itself. Is that how it works for you? Like does hearing the music push the play button on a memory of the music video?

Japa : No... Well sometimes maybe a bit like that, but most of the time is more like a music visualizer that pulls on visual elements like color, shape, image, motion, and so on. It combines, abstracts, and modifies them in ways I don't really consciously control, a bit like a mild daydream.

Aben : Is it any different from just normal daydreaming while music affects your mood?

Japa : So different! Daydreams, they... they evolve as a story, the elements of the story are what guide progression. Seeing music is different, the visuals and the whole experience is driven by the music. I guess if I'm daydreaming while listening to music then it sometimes kinda switches between the two... transitions I mean, the two modes can blend and transition, but even when mixed together I would still say that both are distinct things happening together.

Aben : Can you control it? Like can you choose which one you do and how it progresses?

Japa : Yes... Well... no, I wouldn't really call it control, I can lean into one or the other, more like riding a skateboard as opposed to steering a bicycle. Not sure if that makes sense.

Aben : It makes perfect sense, I get what you mean completely. Do you have to close your eyes for it to happen?

Japa : No. It definitely helps a lot, but if I just unfocus my visual attention I can do it with my eyes open to some degree. I mean, I can daydream and fantasize with my eyes open, can't you?

Aben : I can... draw on and recall mental images, but it's really hard with my eyes open. So do these... have any... um... linguistic components?

Japa : Like words? I don't ever remember seeing text.

Aben : So just aesthetics and visuals then, it just like a pretty picture or cool music visualizer, not much meaning.

Japa : Oh heavens no! So much more!

Aben : Like what?

Japa : The elements... they connect and evolve... they form scenes and transitions... streams of images, shapes, movements, and feelings... They are stories.

Aben : So they convey complex ideas? Can you choose to visualize things and inject them into the stream? Can it become like a visual conversation?

Japa : That's... Ummm... I was about to say that's a weird thing to say, but no, it's not weird, it's accurate, you hit the nail on the head.

I can add elements by choice, I might think "this could use a ray of light, or an explosion of color, or a butterfly or something." Sometimes I bring in the thing and it gets integrated or expanded upon, other times it just doesn't take and it fades away as if it was rejected... and I can do the same, I can reinforce or reject the random things that pop in.

I guess there are two skateboards somehow connected, and I'm just one of the riders.

I suppose it is a type of conversation... Yeah. It sounds a bit weird to say though.

Aben : Not at all... Just... I don't really get the part where sounds become visuals... That's the part I can't wrap my head around.

Sound is so one dimensional, I don't get how it can become something like 2D visuals.

Japa : What do you mean one dimensional?

Aben : Sound... Hearing, audio, is a 1D stream of stimulus, and time is the one dimension.

Japa : That's so not true! There are frequencies. If you look at a spectrum analyzer audio becomes 2D, like visuals.

Aben : That's such a false equivalence! I could use Fourier analysis on a single pixel of video to create a whole new dimension too, and that's just using the time axis, vision is 2D without factoring in time.

Technically I was being generous when calling it one dimensional, compared to sight, hearing is zero dimensional.

Sight has X and Y, with time it's 3D, then I can add in color channels R, G, B, and brightness to reach 7D.

Japa : Haha... First off, speaking of derivatives, brightness is a derivative of RGB.

Aben : No, it's not! Rods plus three types of cones. Four unique sensors.

Japa : Hearing has a massive amount of cilia, hair like sensors, tuned to different frequencies, just like rods and cones. Sight has 4 different frequency tuned sensors, hearing has... I'm not exactly sure, I would have to look it up, thousands I think. So by your own reasoning hearing is a sense with thousands of dimensions haha.

Aben : OK, I'll admit that definitely constitutes a dimension, one of frequency resolution, not thousands haha.

Both sight and hearing are stereo, so let's just ignore that, and whatever triangulation resolutions can be achieved we can ignore too.

But sight also has an adjustable lens and iris. I'm not going to go so far as to call them dimensions because you can only tune into one value at a time, but they aren't far from it.

Japa : Ha. Alot to unpack there.

First off, you totally can NOT equate auditory stereo to visual stereo. The speed of light is so fast we can't use TOF, time of flight. Sound waves, however, travel slow enough that it is possible to measure TOF. Also, we can create sound with our bodies in many ways so, like bats or a blind person's cane, echolocation is possible.

Secondly, you have completely ignored OHC, outer hair cells. Most people only think about IHC, inner hair cells, these cilia form a line of sensors physically tuned to fixed frequencies, but parallel to that row of IHC there are three rows of OHC. The OHC are able to change their length, they can amplify, enhance and enable selectivity in our hearing.

Aben : So you are saying OHC are equivalent to lenses and iris.

Japa : More! They are like having thousands of lenses and iris spread across a spectrum.

As much as I'm loving this little sensory debate, are we going anywhere with all this? Was there an original point?

Aben : Oh yeah, haha. I was saying that I don't get how sound, something so ephemeral, can translate into something so tangible as a visuals.

Japa : You still trying to say hearing is less real than vision? Are you trying to repeat the debate we just had? Haha.

Aben : No no, hehe. I just mean that sound is the only sense where there is really no actual contact between sensor and sensee.

Japa : Are you crazy? Cilia are literally mechanical touch sensors, the pressure waves of sound physically push and pull the hairs back and forth.

Aben : Yeah, but they travel through a medium, usually air, the particles, atoms or molecules that touch you didn't actually come from the source.

Taste and smell react to molecules that come directly from the source, touch is physical contact with the source, sight detects photons from the source. But for sound the pressure wave is an emergent phenomenon, not an actual thing or particle.

Japa : You say that, so do you want to argue that photons are not an emergent phenomenon of a field.

Aben : Photons have particle properties, a single photon doesn't radiate in all directions.

Japa : So are we just ignoring interference patterns and quantum dynamics?

Aben : There are conditions where photons act like waves or have wave-like properties, but they also collapse into particles, sound and pressure waves do not.

Japa : I'm playing devil's advocate here, but directional ultrasonic array speakers create a directed beam like a laser.

Aben : Now you are just being silly, not at all the same thing. The waves radiate omnidirectionally, there is just a straight line where constructive interference occurs.

And you just used your turn to make a silly point. Now I'm going to point out that photons are more particle-like because they have discrete energy levels, so now I'm ahead by two points haha.

Japa : Hahaha... What about comparing a single chain of molecular pushes as a walking particle?

Aben : Even if you tried to imagine it as a kind of discrete quantized unit of force, it would still be a random walk. You would need many before the emergent sound waves started to appear. Photons, on the other hand, can exist as discrete single units that follow all the same rules.

Japa : Ok ok... I give up, you win! Sound is an emergent, or as you put it, ephemeral phenomena, haha. Where are you going with this?

Aben : Nowhere, I just have trouble understanding how sound can trigger visuals.

Japa : And... your confusion is because sound is somehow less tangible than sight?

Aben : kind of... it's like... it's like you are inflating the sound experience, raising its dimensionality.

If it was the other way around, like sculpting from a bulk, that seems natural.

But how do you make a sculpture from a piece of paper?

Japa : Origami? Hahaha...

Aben : OK.. Hehe.. I walked into that one, but you know what I mean.

Japa : Yes... I Just don't really...

Why do you...?... Wait! How come you seem so understanding and on the same page about all the descriptions and abstractions of the experience if you don't get it at all?

Aben noticeably uncomfortable

Aben :... No reason.

Japa : No no! You even suggested very detailed and perfect analogies, you were right there along with me all the way as we discussed the experience...

But you say you don't understand how it goes from, what you call, lower dimensional audio to higher dimensional visuals...

Do you experience it the other way around? You do, don't you? *Aben crosses arms and pulls back*

Japa : What's wrong?

Aben looks at phone... signals the service staff..

Aben : Let's walk a bit.

Japa : Sounds good.

*Aben pays when staff comes over, then they get up and wander off... *

Japa : I can tell you are holding something in, come on... Out with it!

Aben : It's not the kind of thing I usually talk about.

Japa : Look... I'm no therapist, but I do know it's never healthy to bottle things up.

Aben pauses then reluctantly begins to speak

Aben : You are right. I do experience the other way around. It seems like I'm the only one though. Everyone always talks about the kind of experience you describe, it's obviously normal.

Japa : So you are afraid of people thinking you are weird?

Aben : Kind of...

Japa : So most people can see sounds, but you... hear sights... Ok... I do grant you that it does come off as a very unusual sounding.

Aben : See!

Japa : So what?... You shouldn't worry so much.

So... for me a burst of dramatic tone might stimulate me to visualize a bright red blast.

So it basically just happens inverted for you?

Aben : Not really...

That visual you described, the bright red blast, is it just a color? Nothing more, just a flat hue?

Japa : No... It's...

Aben buts in

Aben : It's more abstract, higher level, it carries meaning and emotion, it represents complex feelings and ideas... Right?

Japa : Yeah... More or less...

So... when you experience it the other way... The sounds you hear have complex meanings and feelings...

... Do you hear voices?

Aben : SEE! That right there, the way you are looking at me right now.

Japa shakes off a gawking expression

Japa : Wow, I'm so sorry, it caught me off guard.

I guess you have every right to be cagey about it. There is a surge of social stigma and stereotypes that flood up with the concept of hearing voices.

Aben : I know.

Japa : Look, this is probably one of those things where my imagination paints a far more extreme or worse picture than reality.

Why don't you just tell me what it's like, paint me a picture so my imagination doesn't run wild.

Aben : It's basically similar to the way we just discussed your auditory induced visuals.

Japa : So that's why you were so focused on the story and conversation analogies.

So how does it work? What kind of visuals or situations activate it?

Like for me it is something I... Um...turn on... No... something I allow to happen if the situation has the right stimulus and I'm in the right mood.

Aben : Yeah, but let me ask you, can you really just choose to not allow it to happen? Like isn't it kind of always there, in the background, and you just open the window and let it in?

Japa :Yes... You are right... If stimulating music is playing then the experience is happening in the background, albeit in a muted form, even if I don't encourage it. So is that what it's like? You have little voices and whispers in the background when you see stimulating visuals?

Aben : Yes, but it starts out much more abstract, calling them voices or whispers is too tangible for how they begin. They don't become voices until I engage them.

Japa : Engage them?

Aben : It's like... you know how some people are shy and easily steamrolled by others?

Japa : Yeah.

Aben : It's like that. I have to give it a quiet moment of attention, otherwise it is just like that person who has something to say, but someone who just won't push or fight for chance to speak, however, once they open their mouth and start talking then they have so much pent up to say and they just start rambling non-stop.

Japa : Do the voices ever tell you to do things?

Aben : Arg!... there... that's the kind of stuff...

Japa : I'm sorry, I didn't think before I spoke that time. That's a silly stereotype based on ridiculous media and entertainment portrayals. This all just sounds so ... unfamiliar to me.

Aben : It shouldn't. That's what bugs me most, people have such extremely distorted stereotypes about this stuff, but it should be perceived and accepted as completely normal.

Japa : What do you mean? It sounds like something so unusual. You think everyone should have the same experience?

Aben : Yes, or at least something similar. We all have two hemispheres to our brain, they can act and think independently.

Japa : I do remember some interesting studies and stuff about that. The connection between the two hemispheres was cut and people started to present very strange behavior, as if each side of their body was an individual person or something, right?

Aben : Yes, if the connection between hemispheres is broken then each hemisphere gets control of half of the body and can see from one eye. You can interact with either half independently. Take it further and if you make it so neither side can see what the other side sees or does, then it's almost like interacting with two separate people... almost.

Japa : Almost? I kind of remember but it's faded, refresh my memory.

Aben : So only left-brain can speak. You can use text cues to talk to either brain independently by only letting one eye see it. If you ask right-brain, not letting left-brain see the instruction, to pick up an object, then right-brain will do it, but left-brain won't know why that happened. If you

ask left-brain, with voice, why the object was picked up, it will invent a rational sounding excuses like 'because that is the best object from the options available'. The person literally starts making up excuses and believing their own lies, the speaker doesn't know why they picked up the object but they give confident wrong answers for why they did it.

Japa : Oh yeah, the left hemisphere, our speaking hemisphere, is full of B.S. haha, I remember now.

Aben : Kind of, left-brain is just really good at rationalizing, and seems to give answers even when it doesn't know the real reason. It's probably very hard for it to comprehend seeing its own body perform an action but not know why, so it just makes up a rationalization.

Japa : O.K... so I think I get it, you are saying that we all have two voices, one that can talk and one that relies on telling the other one what it wants to say. You think the right hemisphere is the other voice that you let, or coax to come out.

Aben : Basically, yeah. Technically everyone should have a right brain always whispering to their left brain. Right brain is more involved in visual skills, body language, spatial awareness, artistic capacities, and so on.

Japa : So when you give it the floor to speak, what is it like?

Aben : It feels like I just give it a voice, at the same time it feels like it is me, but I still don't know exactly what it's going to say until the words come out.

Japa : So you say it out loud?

Aben : I can use my inner voice, but that is a much softer effect.

Japa : Softer?

Aben : Before I give it a voice it's just an idea, it's unformed and abstract, it's like how sometimes you know what you mean but you can't quite put it into words, almost like it's in a quantum state and only by speaking the words does it collapse into something concrete. When using the inner voice it doesn't feel like it fully collapses, at least not as hard and tangible as using a full spoken out-loud out voice.

Japa : I totally get that, sometimes I try to paint a visual I have in mind and only when I put brush to canvas do I realize the visual feeling didn't have a tangible form yet and it takes shape as I paint.

Aben : Exactly, and I bet as you're painting, sometimes you say "nope, that's not it" and you have to redirect, modify, or back up and start again.

Japa : Of course.

Aben : Well, that's what I do, only with speech.

Japa : But speech triggered by visuals? I can totally relate to inner speech or talking to yourself, but I don't understand the whole visual trigger part.

Aben : I feel the same way about you and your auditory stimulated visuals... O.K....

So it's kind of like a strong visual can create an urge to say something I won't quite know what at first, not until it takes form. Also, whatever I'm seeing or looking at imbues character and personality into the voiceless-voice, or I guess the right-brain voice. I can start the conversation anytime I want. On the one side, left-brain, there is a voice that seems rather consistent, and on the other side there is a voice who takes on all sorts of personalities.

Japa : So it's like one person talking to a crowd? Or....

Aben : More like one person who is very literal and direct trying to talk to a very unstable person with multiple personalities, not so much like a crowd. The unstable right-brain voice can change its personality at any moment, like an improv actor who easily switches hats and characters.

Japa : That sounds like a very frustrating conversation haha.

Aben : Literal voice might think that sometimes, when I actually do full-blown out-loud speech with myself it's often like one character trying to interrogate or pin down an opponent into a fixed meaning.

Japa : And that voice changes every time you see something?

Aben : More like when a new form occupies my internal visual space, I can retain the character longer by holding on to the internal visualization. I can of course also use memories and imagination in place of actual sight.

Japa : This sounds so similar to visualizing sound. If I focus on a song I know well I'm able to create a mental playback and it can generate visualizations, and if I hum or tap or sing then it can be even stronger.

So I'm curious.. Does umm...

Japa looks around

Japa : ...this is gonna sound weird, but does that tree say anything? Does it have a personality?

Aben : Yes, of course it has a personality

Japa : What does it say?

Aben : ...this feels weird... doing this on request... out loud... with a tree in public...

Japa : You have come this far, what do you have left to hide?

Aben : ...l guess...

Japa : So... what does it say?

Aben : Look at me.... I am big and grand, I cast such a wide shadow... but don't touch me, stay away. Look, appreciate, but don't touch!

Japa : ... O.K.... that made sense... well... your tone kinda shifted a bit there.

Aben : First I saw the canopy of leaves, then I looked down and saw the rough protective bark on the trunk.

Japa : So that's it... it's basically just personification, but a rough feeling based on visuals. That's not so weird, very useful for an artist I would think.

Aben : Oh no... That was just giving it a voice and a few words, I didn't engage with it.

Japa : Well then... On with it!

Aben jumps into a rapid fire dialogue, no pause or hesitation between the self-exchanges **Aben** : You are a bit of a tease!

I'm not a tease, I'm just private!

Yet you stand out, so grandiose and proud.

Yes.

But then you act all cagey and protective.

Yes, so what, are you saying I'm not allowed?

I guess I can't say you're not allowed to be yourself, but it seems you want attention yet at the same time don't really want anyone to get close.

I want attention and admiration, of course, don't we all, but I am cautious

Why?

Look at how thin my trunk is, yet it alone supports this massive canopy.

I see

If I was not carefull and protective it would not take much to bring me crashing down

Then why do you broadcast your presence

That is my purpose, it is who I am. I shoot up and branch out, I grow and grow.

Until when?

There is no when. Just growth. Branches into the sky, roots into the earth.

... I could keep going on like that for pretty much as long as I want

Japa : I love that... Wow...

Aben : ... Thanks... I guess...

Japa : I'm going to try doing that sometimes... Maybe I can learn to do it too. I do understandard why you are so reluctant to open up and talk about it, there are definitely a lot of stereotypes to overcome and misunderstandings to navigate.

Aben : Oh yes! It has been a long time since I have been open about this kind of stuff.

Japa : So what about people? Do they stimulate the same effect?

Aben : Of course. People have very strong voices, I can have so many conversations in my head just being in public spaces seeing lots of people.

Japa : What about while you are talking to them?

Aben : Kind of... A bit, but not so much. Engaging in conversation with a person largely drowns out the effect.

Japa : But it's still there?

Aben : I guess it's kind of like a predictive whisper, maybe... like it is reading their voice, facial expressions, body language, and the situation, trying to guess what they are thinking.

Japa : I get that, I think everyone does that on some level, and like you pointed out earlier, the right brain reads body language and the left brain is the speaker, I think most of us just call the right brain voice by other names based on what it says, like intuition, instinct, or empathy.

Aben: Yeah. I'm curious, those visuals of yours, are they kinda grouped into types and styles? Do they pop out in your art like functions? Can you call them up when you need or want them?

Japa : Yeah, for sure. I guess you could say I collect them, I use them alot in my... wait... I have realized that your questions are actually descriptions of your own experience in disguise haha... you collect voices don't you?

Aben : You got me... yeah.. Is that weird? They are super helpful for brainstorming, problem solving, and introspection.

Japa : Do you have a collected copy of me?

Aben smirks Aben : ...yes...

Japa : O.k., if I'm being honest, that feels a bit weird. What is it like?

Aben : Well, you know how people often say "What would X person do?". Do you ever do that?

Japa : Yeah.

Aben : Well, probably like that. Except I have a lot of practice doing it and I have full conversations with an approximate emulation of your personality... well, to be precise, with an emulation of how I perceive you to be. I'm sure my copy is not accurate in many ways.

Japa : Does this version of me have memories?

Aben : I do imbue it with our shared experiences and things I know about you. Also it does often have awareness of things you wouldn't, I can't completely quarantine it from my own knowledge and memories. It's just an approximate emulation. I don't really control the way it works, it's an abstract skill I have developed.

Japa : You do this for everyone?

Aben : I guess... I mean I do it even for people I don't know, even for inanimate objects.

Japa : And new stuff just kinda gets added to your collection or repertoire?

Aben : Yeah.

Japa : So the way I collect visual styles and aesthetics... you collect... souls?

Aben : That sounds so creepy... I collect characters.

Japa : O.k., fair enough... characters.

Aben looks up and sees a one-way street sign

Aben : So... after all that, is your perception of me permanently changed? Was me opening up like that on a one-way street? Can you go back to treating me like a normal person?

Japa : Ha! You think I considered you normal!?!? Even putting all this aside, you are a super eccentric individual.

Aben : So you won't treat me any differently now?

Japa : Oh, I'm pretty sure it will affect how I see and talk with you, I can't just pretend I didn't hear all of that. This stuff directly affects our conversion process, but I can promise you I'm still your friend, and this is just one more eccentricity in an already mile long list of your peculiarities haha.

Aben : I guess I couldn't ask for more. Thanks for keeping an open mind.

Japa : What are friends for. Y'know, I wonder... you experience visuals that become voices, I experience sounds that become visuals... is it possible to do both? Like can it be a two-way street?

Aben : Left-to-right and right-to-left?... wouldn't that create a feedback loop?

Japa : Good point, I guess someone like that would lose touch with reality pretty easily huh?

Aben : I'm tethered to reality by sound. You are tethered to reality by sight. What would people be like if they didn't have a tether?

Japa : I imagine this is actually one of those matter of degree things, I bet everyone does experience both ways, just matters of degree.

Aben : You're probably right, I bet there is a bit of a feedback loop for everyone, that's probably why it seems like everyone is only partially living in the shared reality while also living in their own personal feedback loop, the feedback loop is probably a bit like a self-induced simulation or delusion.

Japa : Agreed, I wonder what happens if that feedback loop grows? Or if it is intentionally fed and trained? What would that...

Voice : Aben! There you are! Sorry I'm late

Aben : No worries Japa, I was just... Talking with myself

Japa : I got those concert tickets.

Aben : Sweet, I love this band, their music always feels like a glowing magical forest.

Japa : A vivid description... So where to?

Aben : Let's walk the wrong way down that one way street over there.

Japa : Awesome, haha... You are so random, I love it.

Aben : Random is just what people think when they are missing information hehe, but you know what makes great random content generators.

Japa : What?

Aben : Generative feedback loops... hahaha

Japa : You are so weird sometimes.

Aben grins proudly Aben : I know!

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