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A Philosophical Fantasy

written and “performed” by Daniel Rosiak

*The year is 2584, according to the now obsolete method of reckoning time. Somewhere deep within Amazon-Google’s labyrinthine headquarters—formerly known as Planet Earth, still uninhabitable, it would appear, save under the cover of Amazon-Google’s strictly-regulated artificial atmospheres—you find yourself drifting through a long hallway in the quaintly named “Sensory Engineering and Experience Simulation” wing. As if automatically, you are drawn into a room marked “Civilian ‘Audible Sound’ Simulation.” The room itself is compact, but contains in its ample archives the most comprehensive collection of soundscapes, recorded over centuries, including even a number of first edition sound-simulation neural implants of ancient recordings made in the decades just prior to the first of the major threshold shifts in the audible bandwidth. You have been here before. After “approving” a few favorite chips, you come across one you’re sure the room’s algorithms have never suggested before. “Tree falling in forest,” it reads. Intrigued, you approve it. You’re surprised to find that it greatly disturbs you. Such a sound, it almost seems, is new. Trying to shake it off, you go through a few more “oldies,” and then you leave...Later that evening, perhaps still disturbed by your “experience” earlier that day, you take a number of wrong turns, deviating from your habitual course, only to find yourself somewhere within what appears to be the “Abstract Reasoning, Experience-Synthesis, & Other Enigmas” wing. Not overly familiar with this wing, and not in the least with this hallway (they all look alike after a while), you resolve on a whim to approve your entrance into the first room on your left...**

**A note: Like all rooms in Amazon-Google’s extensive facilities, this was no “room” in the ancient sense of that word. In fact, to speak for a moment in the language of the “bulk-material-minded” ancients, it was no more than a barren closet. Aside from satisfying the occasional whims of the collector of antique bulk matter, such crude spaces had served no real purpose ever since the great merger of biotechnology, nanotechnology, carbon nano-tube based computing, acoustics, and the field of molecular assembly or “nanomoting.” Shortly thereafter, with the full arrival of the “miniturization explosion,” when ultra-*

speed molecular nanotechnology finally allowed for the rapid and efficient redesign of physical instantiation, the revolution in (and ultimate obsolescence of) biological systems would be complete. With subsequent advances in pattern-recognition, all manner of thing, idea, and “individual” (to speak anachronistically) were “uploaded” onto the superintelligent cloud. Language-based communication was shortly to be phased out in practice, while being carefully and precisely preserved, like all else, in the distributed intelligent datapools of Amazon-Google. Before long, even the last remaining humans occupying bodies were to enter the “game-playing” era, where all devote themselves almost exclusively, as they still do, to the rarefied pleasures of free combination and discovery of patterns. As one of the officially designated “game-playing” sites for the neural implantation of artificially intelligent communicative nanobots, the room you have just entered was no different from any of the other “active intelligence enhancement” rooms. It was simply one of the less frequently visited “Enigma” rooms in this wing, devoted to certain conceptual enigmas with a decidedly historical bent, a field that had gradually fallen out of favor ever since the link between calendar time and biological systems health had been decisively ruptured in the early 23rd century. Perhaps it should be noted that this room typically catered to those with an antiquarian interest in natural language communication and its practice. But let us enter the room...

You appear to be walking at a slow pace in an enclosed forest of sorts. A very ancient looking man, dressed in the fashion of some religious authority, perhaps a Bishop, is walking alongside you, gesticulating emphatically, but somewhat broadly. You understand him to be saying, in a peculiar variant of English:

****Note to performer: to be read in the appropriate accents.****

Berkeley: And thus it is to be questioned: If a tree falls in a forest, and no one is there to hear it, does it make a sound?

It takes your system a relatively long time to process this question in terms not so beholden to ambiguities in the natural language being employed. As the usual advanced concept translation programs are engaged, you notice a tall woman approaching, dressed in a more modern, if exceedingly austere, fashion.

Madame X: But we must be careful to discriminate here. The taste of an apple is not tasted by the apple itself. A melody is not heard by the melody itself. In other words, nothing sensible can be thought of as existing in the thing itself when it is not related to me or any other creature capable of being affected by it. Eliminate all possible observers and you eliminate the sonorous, the visual, the olfactory, etc....The sensible, it would seem, *can* only exist as a *relation*, a relation that can just as little be reduced to the side of the perceiver as to that of the perceived. These sensible qualities can be called the secondary qualities of a thing—because we require *at least two*. You will note that the question the Bishop poses begs us to consider whether, beyond these secondary qualities, we can admit properties which would belong to the thing even without regard to whether there is anyone there to apprehend them. These properties we will call the primary qualities of a thing, since the quality can be thought of as independent from whatever else happens to be related to it. Since, as is well known, it has been 3 centuries since we finally succeeded in reducing music and mathematics to a common denominator, using those basic symbols to grasp the totality of the universe of information, by primary qualities let us understand those aspects of the object which carry information which can be formulated in our music-mathematics. Thus, I conclude: as regards the secondary, purely sensible qualities of the sounding tree, one must answer in the negative: without a perceiver, the tree does not make a sound. But, for those primary, mathematical qualities of the sounding tree, I say that the tree does indeed make a sound, whether or not there is a perceiver.

An middle-aged gentleman in a labcoat joins the group.

American Scientist: Right, then, so what you're saying is that the unperceived tree will have no pitch, loudness, timbre, or dissonance qualities, since these are qualities which, practically by definition, are dependent on the involvement of a receiver. On the other hand, the unobserved falling tree, I think you want to say, is a disturbance in a material medium, air in this case, producing variations in air pressure. And these disturbances, for their part, can be coherently formulated in our thought, independent of any assumed observer or receiver, as sound waves with a definite measurable amplitude, frequency, and spectral content. I cannot disagree with you

there. But I hope you see that there are nonetheless certain problems in this distinction, Madame. For instance, in aiming to draw a sharp distinction between the primary and secondary qualities, you seem to be ignoring the immense cooperative work of the auditory system with the brain in translating a veritable sea of confusion of air pulses into a more select set of electrical signals. After the ear has done the work of translating mechanical vibrations into electrical impulses carried to the brain, which subsequently processes these signals, the brain's processing translates these complex component signals into an individual sound experience which we have rather lazily agreed to call a merely sensible quality, ignoring all the heavy intellectual work of analysis and synthesis that has already been done by this point. And, there is this also: Madame, I admit that the common sense assumption which takes the secondary, sensible qualities to represent reality or something inherent in the object is no more than the result of a rather fanciful, if comfortingly persistent, hypothesis, the final inferential evidence for which no interaction between an ear alone and a local change in air pressure could supply. But a problem, Madame, is that, for reasons similar to those already given, we seem no more warranted in our assumption that the fixedness of properties we measure with the aid of our mathematics can be established entirely in independence of the position and mediation of our measuring devices. So I suspect things are not as simple as your primary and secondary quality distinction would have it.

That seems to you a bit more sober-minded and tractable than the original question—yet you are not satisfied on a number of points. But as you make to offer a contribution, your group is joined by yet another type, who practically bursts into the circle.

Colonel Smith: But, excuse me, excuse me, I venture all y'all forgettin' somethin' you intellectual types just luuuvve to forget, which happens to be my field of operation: practical matters—which, of course, is to say, *military* matters. Now, You tellin' me we ain't got *one* military base in the vicinity of that tree?! It only takes one military base to make that damn tree sound! As for this distinction y'all got goin' here, lem'me tell y'all somethin'. In my day, during WWII, before I became head of *Hypersonic and Infrasonic Weapons Research and Development* division for the United States of Silicon Valley, me and my regiment knew a little sumthin' about the malleability of what you intellectual types callin' the "sensible". Lemme tell you—ain't no such fixed thing as

the sensible. Back in my day, we military types were the ones doin' all the real experimentation in hearin'. We were modulatin' the audible bandwidth and affecting the brain with +20 kilhertz signals; we were deep in infrasound short circuit torture acting directly on the vestibular system and the fear-centers of the brain; we were making intense impact sounds actin' on that enemy body in impulses faster than any ear; we were manipulatin' the middle ear's reflex system; alterin' the resolving power of the ear; experimentin' with directed inaudible sound weapons to produce friction between certain internal organs. You got no idea! By God, just as a throwback to the ol' days, we e'en tortured them rogues with Muzak isolation rooms. Dem boys in the regiment called it *MADED* for short. *Muzak all day e'ery day*...Anyways, all I'm sayin' is this: sound ain't no more than just another weapon for concentratin', redistributin', and destroyin' a body's energies. If you got an ear sensin' in one fixed way, all you got to do is take what we used to call a *sound hammer* to it. Just listen here: you want to change a peoples and their values and their fancy thoughts, just gim'me a few days with their ears. But, take my word, you ain't never gunna find no ear that picks up a sound without already supplementin', suppressin', selectively processin', all the while being modified in turn by all that processin' and selectin'. And you ain't never gunna find no ear that can't be made to do otherwise. So I'oh know about this here fancy "primary-secondary" distinction y'all got goin'.

Enter a very severe looking German.

Herr Professor Doktor Ernst Klangmacher: Mein General, how could you haf dem in de Muzak room?! Dis iz de height of de cruelty! I mean, Vhat if you haf tortured anodher like de great Bach, vonce a prisoner himzelf?! But, ja, you know, as a Musik Meister, I am often astounded at dis highly mediated and malleable power of zelection und discrimination in ze supposedly merely zenzing ear. But I vill haf you konzider dis: in musik ve haf, for example, alzo ze capability for de missing fundamental to be supplied. Dis, you know, iz vhen viz de complex periodic sound made of frequencies 2, 3, 4 times a missing fundamental, de ear vill zupply de fundamental vvhich does not in fact sound. Dis zupplied vaveform does not appear in de Fourier analyziz of de zound. But vvhile de ear hears an alteration in de timbre, it hears a pitch equal to de zound viz de missing fundamental. To all ov my composition stuudenten dis capability to

supply de missing fundamental I teach. For all de tonal musik is de prolongation of de tonic triad vich itzself iz understood from de ursatz, that is, de, de, ground. If de ear iz always fixed to de most fundamental in all events, it vill always know vhat is to be expected, and zo it vill know how to circumvent de expected tranzitions and dis standardization of de popular muzak. A muzical meister iz one who must always inzerit ze unheard for de expected. In zhis vay dhey break de conventions ov de ear. Zo, to come at last to de tree, I vill two dhings zay: *vone*: zupposing someone iz dere, ve cannot be sure dat vhat they hear iz vhat is there in de mathematical zounding of de tree. Und, if you haf a musician, ve can be sure they vill uze de tree dat iz dhere to hear a tree vich is not dhere. In dis vay, ze deficiencies of de vorld and itz mathematical models vill be supplemented by de overreaching zenses of de great artist. Which brings me to mein oder point: vhy are you all talking about a falling tree? Vhat iz dis compared to de musik of de great masterz? Und do you not know dat after de great Beethoven, it iz no longer valid to write dis, dis, *Natur Musik*?!

A sharp-eyed, high-foreheaded, three-piece-suited, pipe-smoking gentleman is pacing back and forth, as if keeping himself apart from the group.

Holmes: Remarkable, Herr Doktor! You astound me with your powers of deduction! But I must beg your pardon for employing my own powers to rather different purposes. As you must know, since there are no more criminals, I have been compelled to invent my own profession, thus becoming the only consulting sound detective. And you know my methods, Watson. By the way, did you enjoy the all day Stockhausen performance yesterday, Doctor?

German Doktor: Vhat did you caall me? And how could you know dat I vent to hear de, de Stockhausen?!

Holmes (*as if not hearing the Doctor*): The ideal reasoner would, when he had once been shown a single fact in all its bearings, deduce from it not only all the chain of events which led up to it but also all the results which would follow from it. The observer who has thoroughly understood one link in a series of sound events, should be able to accurately state all the other connected

sounds, both before and after. We have not yet grasped the results which the reason alone can attain to. To carry the art, however, to its highest pitch, it is necessary that the reasoner should be able to utilize all the facts which have come to his knowledge; and this in itself implies a possession of all knowledge, but even without that, it is not so impossible that a person should possess all knowledge which is likely to be useful to him in his specific work. My method, I might add, entirely unlike that of the esteemed Herr Doktor, is founded upon the observation of trifles, through which method I make myself a complete servant of the facts. Beg your pardon, Herr Doktor, but when I hear talk of fundamental sounds of any sort, I reach for my morphine syringe, lest I expire of boredom. In the realm of sound—as in all else—minutiae, trifles, and the circumstantial are of infinitely greater interest than the gross, the fundamental, and the climactic. The latter represent to me no more than stagnation, against which my constitution positively rebels. The former, on the other hand, supply us with the only inexhaustible reservoir of still valuable information. For as the statistical probability of something decreases, its informational value increases. In the stagnant pools of mass-phenomena, one never leaves the statistically probable, thus depriving oneself of valuable information. And, one more thing: You'll forgive me again Herr Doktor for disputing your colourful conclusions, but I must insist that for strange effects and extraordinary combinations, we must go to the world itself, which is always far more daring than any result of the efforts of the imagination. The cosmos of sound is infinitely stranger than anything which the mind of man could invent. If we could fly through the universe at all speeds, removing the obstructions and making all the necessary translations from one waveform to our preferred sort, and lend an ear to the strange coincidences, the plannings, the cross-purposes, the wonderful chains of events, working at once on infinitely diverse temporal planes—from the slow sounds of the mildest of collisions in an elastic, dense gas to the sound of space itself stretching as two black holes merge—it would make all sonic fictions, all art-music, with its conventionalities and foreseen conclusions, appear most stale and unprofitable. But no doubt I bore you all with these idle speculations. Incidentally, my dear Bishop, I should mention that I have solved your case of the unsounding tree, though there are a few minor details on which I should very much desire some further clarification.

Herr Doktor: But what?! You have solved de problem? What you are saying iz, iz—das ist impossible!

Holmes: Quite the contrary, Doktor! It is by eliminating the impossible, that I can be certain that what I am left with is the truth, no matter how improbable. It is all very simple. As you must know, in spatial interference of two continuous waves, there will be areas of local destructive and constructive interference, where the effect of the one series of pulses on the displacement of air particles is canceled or reinforced, respectively, by the effect of the other pulse. The sum of two waves can, in the case of destructive interference, be less than either wave alone, or can even be zero, when the otherwise equal waves are exactly 180 degrees out of phase. Practically speaking, the interference of waves doesn't really cancel energy so much as redirect it elsewhere. And no two waves in destructive interference will be so totally or at all points, but will produce patterns of partial reinforcement and cancellation. Adding to all this that natural sounds are never pure but complex tones consisting of many combined frequencies such that, at any one point, at best some of the component frequencies would destructively interfere, I deduced that for the effect of such sustained destructive interference there must have been certain highly peculiar features in the position and movement of the Bishop's observation position and surrounding objects in relation to the multiple sources. I know of only 4 earthly locations which have might been capable of bringing together such a rare concatenation of causes during the Bishop's lifetime. One of these sites, I know, happens to be within a stone's throw of the Bishop's former residence during the waning years of his life, when he penned the question you were all just now engaged upon, which can hardly be a coincidence. That, with a falling tree, we are not dealing with a repetitive, periodic wave form, but more of a non-periodic pulse, leaving us with a far more complex spectrum, does, while presenting certain complications, at least provide us the opportunity of establishing with greater precision the exact time of the sound crime. But as I fear boring you with the further elaboration of all the nuts and bolts of my reasoning, I will simply remark that the tree you are looking for no doubt was a copper beech tree, thriving throughout most of the 18th century, which stood in the small park not far from Hollywell street, Oxford, five blocks north-west from where you, Bishop, were perceived to have lived and died the year of 1753. I am also quite persuaded that it fell at some point in the evening in fair weather during

the month of august that year. But if the Bishop will be so kind as to ring at 221B Baker street this evening, I think we shall together be able to lend an ear to the remaining details.

At this point, a young man approaches, wearing only jeans and a tee-shirt that reads “John Cage Rules (Non-Hierarchically)”.

Cage: Yea, that’s all, like, real dope and such, man, and I can get down with the detail stuff being like far more, like, uh, dope like, than the foreground/background and cultury stuff—like, no offense to you, Doctor. But literally what you’re sayin’, Mr. Holmes, is a little partial, like, a little heavy on the analysis and information, you know, man. I mean, like, you literally got this unheard tree noise over here, you know what I’m saying? Then you got all these people trying to get at the tree, you know what I mean? But, like, consider this, man: what are you all trying to get at the tree for? What if the tree, like, in staying unheard, is, uh, I dunno, like an invitation to hear more anonymously, you know. I mean, like for there to grow an absence of competition, man, in your hearing. Ya dig? Check this, like, we all know the intensity of a wave drops off as the square of the distance from the source, man, but if you didn't have friction or resistance in the medium, and forget obstructions and such, like, all sound would technically continue indefinitely. You know? So maybe, like, in trying to find the tree, you’re just gunna add to the things that get in the way. What I mean is, like, instead of running around and such trying to be there for a falling tree in some forest, you know, putting all your energies into finding an isolated needle of information in like a haystack of noise, why don't you just, like, stand put, man, and like learn to make your hearing diffuse enough to capture, like, all the traces in the noise, you know, what gets left unheard, in where you’re already at. I mean, like, if you want to talk about logic, man, like, check this logic: what if noise, at the limit, were just like space-time bending itself, man. Then when you’re listening this way, you like let your hearing go so far into the background noise, man, that, you’re practically picking up traces of the cosmic background radiation, like. Then, you see, like at the limit noise wouldn’t carry less but *more* information than signal, you know. And, uh, you know, man, I'm just saying, what if, like, uh, the uniformity or disorganization of sound is like more a reflection of the way we *want* things to be than like relevant to the cosmos, you know.

At this point, to your surprise, they all suddenly turn to you, which, in all your experience “rooming,” is a first. But meanwhile you become vaguely aware of a sort of rumbling, creaking noise coming from above you and, increasingly now, slightly shaking the ground at your feet. You look up and see that all the trees around you appear to be coming down. You turn back to the others to see what to do, but they are all vanished without a trace. You are alone. The trees are falling.