



A new Turing test: metaphor vs. nonsense

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Abstract

My basic argument is that a computer cannot distinguish between metaphor and nonsense. This would be my new “Turing Test.” I was very fond of a particular Italian poem, but I was told by an Italian friend that it was a hackneyed poem of little worth. I then taught myself to experience the poem alternately, as real poetry and as the silly nonsense that my friend claimed it really was. Having done so, I realized that I could do the same with any metaphor, such as “having a green thumb.” Thinking about the nature of this switch, from the literal to the metaphorical, I also realized that it was the sort of change that could not be prescribed or even described: this, the basic aesthetic gesture, remains beyond the boundary of logical definition. It then dawned on me that it might provide a test for the validity of a “Turing Test,” by any definition. Can a computer track a mind as it goes through this transformation? I could not envisage such a possibility. This would be a “Turing Test” based on the discipline of aesthetics rather than on technology. It may even be argued that the ability to experience metaphor is the very definition of the human.

Keywords Metaphor · Nonsense · Turing test · AI · Autism

1 Poetry and nonsense

This essay may be of special interest to the team that helped me with my hypnagogia project some time ago (especially Tristan Bekinschtein and Valdas Noreika), but it should also be of value to any scholars who have related concerns in the areas of consciousness studies, theory of metaphor, and autism (Noreika et al., *Front Psychol*, 2015. <https://doi.org/10.3389/fpsyg.2015.00202>). My basic argument is that a computer cannot distinguish between nonsense and metaphor: this would be my new “Turing Test” (Turing, *Mind* 59:433–460, 1950).¹

The route by which I arrived at this conclusion is extremely circuitous, but I don’t think that my argument can be fully understood, maintained, or supported, without a comprehensive understanding of the circumstances that led to this result. I must begin my account of the idea’s trajectory with a misunderstanding, or disagreement, between myself and a professor of Italian, Bruno Arcudi, at the University of Buffalo, over thirty years ago.

I had fallen in love with a brief passage of poetry by the eighteenth-century librettist Metastasio. The passage was used as a powerful theme in “Die Automate,” a story by E. T. A. Hoffmann, and set to music in a song of penetrating beauty by Schubert. I happened to mention my infatuation with the quatrain to Arcudi, who acknowledged my response, but added that this was, of course, just conventional language turned out by the yard for operatic delivery. (Actually, I think that Metastasio is, as a whole, underestimated as a poet.)

Mio ben, ricordati/Se avvien’ qu’io mora
Quanto quest’anima/Fedel t’amo;
E, se pur amano/Le fredde ceneri
Nell’urna ancora/T’adorero.
(My dear, please remember/If I happen to die
That this faithful heart/Could not have loved you more;
And should, in cold ashes/Love linger forever
In the urn too, forever/Will I you adore.)

I didn’t tell Bruno, but I was deeply offended; hurt, in fact. But who was I to judge? My Italian at that time barely hovered above (and has now sunk to) a level between feeble and non-existent. Still, I was so exercised by this dismissal, that I still worry about it—even obsess over it. I would like to rescue this obscure quatrain from the oblivion to which my friend Bruno wished to consign it. In fact, I recently sought reassurance from Richard Dury, a bilingual friend who teaches literature in

¹ Among the many works on metaphor, see especially Aristotle (1996), Black (1962), Lakoff and Johnson (2003); Massey (2018) (see pp. 46–48 for some more recent titles on theory of metaphor); Richards (1936), Vico (1961), Whorf (1956), Zanker (2016: 164–190).

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Italy, that there is something worthwhile to the passage after all. It was set to music by Handel, Schubert, and Glinka. Schubert's keyboard accompaniment, rather as in the "Erlkönig," reveals even greater depths than one could have guessed at from the text alone.² I might add that there is another piece that also seems to convey something from another sphere, Haydn's "Spirit's Song." It was my friend William Kumbier who pointed out the kinship, creating a category of two who have recognized two composers rattling the door of heaven.

BOX 1

Here I must introduce a piece of information which has no bearing on the main argument or thesis of this essay, but which is of such importance for the understanding, both literal and aesthetic, of the poetic passage, that I cannot omit it. In the context of Metastasio's libretto, despite the identification of the speaker as a woman by Hoffmann, Schubert, and others, the lines were originally spoken not by a woman, but by a man.

It is almost with a feeling of horror, but, at the very least, embarrassment that I realize what a difference this fact has made, and still makes, to my response to the passage: to my understanding, and even to my evaluation of it. In a word, it feels to me like a better poem, and even a different poem, if I think of it as voiced by a woman. I was disappointed to find that it belonged to a man. With his unrivalled knowledge of both Italian literature and of music history, Professor Max Wickert was able to inform me that the speaker/singer was the Indian general Gandarte, addressing his beloved, Erissena, in the third act of Metastasio's opera *Alessandro nell'Indie*. (The phrase "Mio ben" may be addressed to a woman as well as to a man, despite its masculine form.)

A specialist in the Schubert songs tells me that the Metastasio libretti were routinely reprinted, cut up, and used in every which way, without reference to their original context. In fact, I believe it possible that these lines were just given to Schubert to set to music as an exercise by his teacher, da Ponte.

The problems in aesthetics which are raised by the change in my response when I discovered the change in the sex of the speaker are too extensive to be taken up in this essay. The mere fact of my mentioning them may in this case be a matter of simple sexism, but they also raise the whole question of the influence of context on our evaluation and understanding of a work of art, and they cast a powerful light on the importance of our subjective position vis-à-vis the work in our interaction with it. The fact that these issues arise in the confrontation of gender roles, their interpretation and evaluation, is another, more specific, if not less important, matter.

Leaving the major questions broached in the above box to be considered at another time, I will return to the disagreement with Professor Arcudi that prompted this extended digression. It is generally understood that the difference between a good poem and a bad poem is difficult, if not impossible, to specify. As is apparent from my disagreement with Arcudi, the difference between a good poem and a mediocre poem is even harder to specify. But what if it were impossible to state clearly the difference between a poem,

even just a substantial poem, and mere nonsense? How tell a real poem from one that is not, that is, from:

Nonsense precipitate, like running Lead,
That slipped thro' cracks and zigzags of the head.

Alexander Pope, *The Dunciad*, Book I, lines 123–124

I am not even referring here to deliberately nonsensical poetry, though any attempt at distinguishing between "Jabberwocky" and mere jabber would only add to our difficulties. What if even metaphors, a major constituent of poetry, could not be readily distinguished from nonsense? (Some would even argue that every poem is an extended metaphor.) In a word, how can you tell the difference between a metaphor and nonsense?

If we see, or hear, phrases such as "having a green thumb," "shedding crocodile tears," or hearing "a blood-curdling scream," we know immediately what they mean. This is not true of everyone. Some people take the words literally, and experience such expressions as mere nonsense. (As innocent a phrase as "Working long hours" can sound ridiculous to someone whose native language is not English.) The consequence of such a form of understanding, or, possibly, misunderstanding, can even, in some circumstances, be serious. In a related situation, it was reported that a woman who was undergoing a psychiatric evaluation was asked whether she heard voices. When she responded in the affirmative, she was hospitalized for a considerable period of time.

We usually dismiss such a "defective" approach to language processing as a minor aberration, a mere curiosity, found in a small subset of the population, and of no interest to the general public. But this is no esoteric pathology that we can safely ignore. For one thing, we have to grapple with the fact that there is no established way to distinguish between metaphor and nonsense in either linguistics or philosophy. What is even more perplexing is the observation that, in people who cannot make the distinction, the brain responds to the two situations in exactly the same way. In other words, it is not a weakness in intelligence, or even a defective act of judgment, that results in the conflation: the physiological response, the so-called N400 signal that reflects degrees of comprehension, remains flat for metaphor and nonsense alike.³ The failure to distinguish is not a failure of intelligence or understanding; it is an actual physiological event, or, rather, absence of event.

The reader may be interested, or, perhaps, merely horrified, to know that I have recently learned, or trained myself, to experience a few metaphors as nonsense; to force them back into their nonsensical condition. What does it mean for someone to have a green thumb? Or to say that he weeps crocodile tears? Or to think that his love is a red, red rose? I have actually learned, though with considerable effort, to switch back and forth between the

² The reader may wish to listen to the Cecilia Bartoli performance of the Schubert song, or, with male voice, the extraordinary rendition by Julius Patzak, which the pianist Dr. Gili Loftus drew to my attention.

³ Faust and Kenett (2014: 5). Some neuroscientists hesitate to accept such a high degree of specificity in interpreting ERPs, but a senior member of the neuroscience department at Stanford, in a personal communication, states that "the N400 is a pretty standard 'semantic processing' signal...".

metaphoric experience/apprehension of these expressions and—what shall I say—their nonsensical equivalents. (It’s something like performing the figure/ground, or rabbit/vase switch, in perception, or—a slightly less precise comparison—like what happens when you resolve a word into its phonetic components, forgetting its meaning in ordinary discourse.) I feel myself to be, in this regard, something of a monster, perhaps the first person in history to attempt such a feat. So far, I have been able to avoid getting stuck in the “off” position. But what would induce one to engage in such a perilous exercise?

What happened, in my case, is that I was trying to understand exactly what would happen if one experienced the Metastasio passage as Arcudi described it—as dead words, trite and unconvincing—in other words, as nonsense—rather than as live metaphor. How would it feel not to have a live experience as one read or listened to it? How would someone with Asperger’s syndrome (or the current nomological condition) read these words? If I took metaphor seriously, I owed it to myself to explore the alternative: what one might call anti-metaphor, or a-metaphor (as in “amusia,” the condition of some people who experience music as mere noise).

Who can take seriously what the singer—and, for my purposes, as for Hoffmann’s and Schubert’s, I assume that she is a woman—is saying? That she will continue to love her lover after her death when all that is left of her is a handful of ashes in a bottle?

Yet, when the speaker in the Italian passage, in helpless modesty, in utter humility, says that she will adore her beloved after her death when she is nothing more than ashes in an urn, we do not hesitate to believe her. In fact, we cannot help but believe her. This is the opposite of nonsense.

But poetry as such—as the enemy of meaning, in the usual sense of meaning—has to be acknowledged to be pure nonsense. This is not because poetry doesn’t mean anything; it is because poetry does not allow language to be subordinated. Meaning is the corpse of language; it is what has been left behind after language has been destroyed, liquidated, discarded. In poetry, the words do not disappear into the meaning; they hang there; they remain untouched; that is why we remember poetry. In poetry, the words stick out: they refuse to be assimilated or integrated. It is not that words in poetry are hiding meaning, but that, in poetry, meaning cannot be extracted and set aside from the words. In poetry, the individual words are illuminated as if by beams of light and stay there.

But, to return to metaphor: the experience of metaphor is a reverse inspiration. It is not that a god breathes life into us, a spirit that we in turn utter as words; it is we who breathe life into nonsense, into dead words. By an inverted vampirism, we pour our own life blood into those words and bring them to life; we add our corpuscle to the bloodstream of beauty that makes the race worth saving.

But what about my painful experiment, my having trained myself to “turn off” the metaphorizing function, leaving myself

with drab, meaningless verbal symbols in the place of an aesthetic or spiritual experience? What use could it have?

One thing that it does, of course, is cast a powerful light on the special nature of the metaphoric experience: it illuminates with startling clarity its unique and irreplaceable status. It lies beyond the threshold of any rational process: it is, obviously, intensely real, yet it cannot be defined. There is no instruction manual to tell one how to pursue and capture a metaphor; either you “get” it, or you don’t. When you switch it off, the light goes off. And there is no way to get from one condition to the other; the gap is unbridgeable.

The area of aesthetics opened up by this experiment, which appears to me vast, remains to be investigated; I myself do not hold any tools that I can think of applying readily to the problem. Although it may be mere evasiveness on my part, I will switch briefly to a somewhat more approachable adjacent area, where I think that psychologists might be able to use the insights produced by this inquiry.

There are, of course, innumerable brain scans of autistic people. There are also scans of the brains of “neurotypical” people during the experience of metaphor, and comparisons can be made between the brains of autists failing to distinguish between metaphor and nonsense, and the brains of neurotypical people who succeed in making that distinction. It seems to me, though, that the observation of a single brain as it switches between one kind of experience and the other, to what might be called a non-experience (see BOX 2), would give one an unusually sharply defined picture of the difference. In other words, it would cast light on this specific feature of autism with an unprecedented sharpness, with a precision that no other method could duplicate.⁴ This information might lead to a better understanding of the discrepancy between autistic and neurotypical experiences of language. More broadly speaking, the investigation might provide us with a rare opportunity to capture subjectivity (and, hence, consciousness) in action.

But this therapeutic, or at least would-be therapeutic, observation leads to another question, of which I am constantly being reminded by concerned friends, as well as by my own previous studies in this field: does this kind of investigation risk undermining the autonomy of the aesthetic, leaving it exposed to reductionist science, so that creativity finally becomes a manageable commodity like any other, and the technological tail, boosted to a higher level, ends up wagging the dog of the imagination?⁵

⁴ For an example of the vague and blurry results of such investigations hitherto, see Djokic et al. (2020). See also Mashal et al. (2014).

⁵ If we can define the borders of the aesthetic so sharply, so that we have cornered it, as the bishop of Antigonish cornered the evil spirit in the MacPhersons’ kitchen in 1927 in Roman Valley, do we not increase the chances of our mastering it, of gaining control over it, of finding ways to tell it what to do? (To be sure, the bishop of Antigonish did finally withdraw in ignominious defeat and return to Antigonish, as the *New York Times* informed its readers at the time.)

Again, that is a question that would require much thought to settle, and to which I will return, but I think that it should be easier to appraise and answer (preferably in the negative), with the appropriate expenditure of time and effort, than its parent, overarching question: what makes for the experience of metaphor? What makes that possible, and what does it consist of? A metaphor is never even completely a metaphor; its “tenor” may be suppressed but is never entirely exorcised. The ordinary semantic element, the pre-metaphoric level, is an integral part of the metaphor, and exists in tension with the figurative. At the same time, the “vehicle” (to use I. A. Richards’s term) is always struggling for independence (Massey 2018: 49–51). Again, I will leave that issue aside, like the others, mentioned but not fully engaged with, perhaps to be addressed in another life. But I will consider the possibility of an only slightly less improbable venture: devising a new Turing test.

But who in his right mind would want to disturb the already restive ashes of the redoubtable Alan Turing? (Clearly, I have pandemic ashes on my mind: “Ashes, ashes, we all fall down.”)

My idea is that the computer would not be able to distinguish between metaphor and nonsense. We might not be able to *prove* that it could not make that distinction, but the fact would remain that it could not. This would be a Turing test based on the discipline of aesthetics rather than on technology.

What is even more to the point, a computer could not effect the deliberate transformation which I have learned, or trained myself, to carry out; it could not *choose* to switch from one to the other. The computer would be entirely unable to do that. It would have encountered what, in AI speak, might be called an undefeatable “adversarial object.”

If I train a computer to identify metaphors by exposing it to millions of metaphors, it is likely to succeed in doing so; but will it be able, *at will*, to *choose* to stop viewing a particular metaphor as a metaphor and consign it to the category of nonsense? (Not even “experience” it as nonsense, which might be a bit much to ask of it.)

We could, to be sure, train it to appear to do so unpredictably, so mimicking the behavior of a human. At that point the problem might fall under the discipline of encryption, and, if there is a horizon at which a code becomes, in principle, inscrutable, then my new Turing test might fail. The machine might “see” a metaphor as nonsense as unpredictably as a human being could. On the other hand, I would argue that resting one’s case on this highly oblique and uncertain kind of evidence is tantamount to admitting failure.

Besides, if the Turing test is made into just a problem in encryption, there is no need to work with metaphors, nonsense, or other complex systems: any action which is imitated by a machine is indistinguishable from a human action insofar as the action itself is considered. Whether we attribute consciousness to the machine or choose not to, is irrelevant.

So, “we” may have arrived at a horizon, or perhaps a wall, of some sort: I can envision a situation in which a computer would pick out a metaphor from a string of phrases as successfully as I could. What I cannot envisage is a computer’s choosing to re-view that same string of words as nonsense.

At this point, I must consider, once more (see above), the question of the vulnerability to reductionism to which such methods might expose the aesthetic. Is it possible that attempting to define metaphor by mere exposure to masses of examples might have unintended consequences? Presumably, the machine would function just like someone examining a police lineup, searching for the guilty party among many innocents. But what if the computer were to identify something essentially human, rather than just the fact of guilt, among the cases that it distinguishes? Perhaps there is some fine earmark, or some trace element, in metaphors, that they have in common; some characteristic that we could not have thought of or imagined, something beyond our conceptual imagination, that the machine might unintentionally reveal.

2 Metaphor and AI

At the time when I wrote the above, the encroachment of technology on this field of experience and inquiry seemed to me only a distant danger. I was not aware that the AI establishment has for some time been taking an obscene interest in metaphor—to the point at which it has now been made possible to mail-order a batch of metaphors, from Tony Veale in Dublin, as easily as it is possible to mail-order any other kind of stimulant: metaphor can now be seen as the worthless residue of an algorithm. (One of Veale’s titles is, not surprisingly, *Exploding the creativity myth*.) But this innocent, apparently insignificant trope has been correctly identified as the chokepoint between man and the machine. Metaphor is the last bastion of subjectivity; gain control of that, and you can throttle subjectivity at its source.

Since I have raised the spectre of AI, I cannot very well avoid describing some of its approaches to, and confronting some of its claims about, metaphor. For this purpose I have selected two studies which seem to me representative: Barnden (2008: 311–338) and the above-mentioned Veale (2012). I have also been in correspondence with Andrew Lison, at the University at Buffalo, an AI scholar who has been writing recently on the limitations of AI.

Barnden’s article shows that AI practitioners are not necessarily burdened with the task of reading a metaphor literally before deciding that a literal reading will not do: methods have been devised for bypassing this obstacle, and dealing directly with the metaphorical “envelope” of meaning (2008: 316–317, 332. Of course, outside this restricted setting, not everything with a flaw in its literal meaning will be a metaphor). Once in a position to grapple directly with the metaphor, one has to decide

what to do with it. At least in the context of Barnden’s work, the objective seems to be to de-metaphorize it; to reduce it, after all, to a literal meaning: “to move abductively from the outward signs to the underlying situations” (2008: 314).

Though I have not found such a purpose articulated explicitly in Barnden’s work, I assume (perhaps incorrectly) that the need to cope with metaphor from an AI perspective arises from the fact that it interferes with machine translation; I cannot think of any other reason to want to “read through” metaphors. Here completely novel metaphors present a particular difficulty (2008: 319, 327). How would a computer deal with an expression such as Robert Hass’s “ransacked moonlight” (2007: 76, line 2), that hovers on the border between metaphor and nonsense, and that could easily be assigned to either category? Nor does it seem possible for AI to extract value from the “extraneous” elements that are an integral part of metaphor (Barnden 2008: 318, 328).⁶ Is not the point in having metaphor in the first place that it does contain extraneous elements, and that, therefore, it exceeds any possible paraphrase? Finally, it is not clear to me, from Barnden’s essay, how AI deals with actual nonsense, or (and this is essential for my own inquiry) how it differentiates between genuine metaphor and genuine nonsense. (See, again, for instance, the quotation from Robert Hass above, or the problem of differentiating between “Jabberwocky” and jabber mentioned earlier.) For that matter, how is a computer supposed to deal with humor? It might be trained to recognize a joke as a joke, but how would it “get” it?

Tim Veale’s book is a wide-ranging analysis of the types, varieties, and strategies of metaphor. It is a highly competent work by an author who seems to be well read in Classical as well as modern sources. For this very reason, the limitations that it displays, characteristic of AI reasoning, are all the more disturbing. A metaphor is more than an expression; it is more like an object, that cannot be reduced to words. To “explain away” a metaphor is a hopelessly futile enterprise. After all, any idiot can point out the ambiguities in Othello’s “flaming minister,” but only a card-carrying idiot would believe that he/she had thereby reduced it to common sense. (As in the other reductive strategies in aesthetics, AI is sharp on the “how,” but blind to the “why” [Massey 2009: 18].)

I can only characterize Veale’s work as a combination of sophistication and willful naivete. One of Veale’s principal strategies in “demystifying” art is to show that it works with commonplace materials. Here, of course, Duchamp’s urinal serves as the example par excellence, and Veale devotes a number of pages (2012: 135–138) to its exploration. His commentary is exemplary, working with the “graded salience hypothesis” and other relevant investigative instruments. But Veale seems unaware of the possibility that his

example proves the opposite of what he is getting at: it does not show that all you have to do is tweak something utterly commonplace to make it into a work of art, but that it takes an extraordinary leap of imagination and intellect to perform exactly that feat. “There is no divine mystery in the workings of creative variation” (2012: 153)—none, that is, except for the mystery that Veale quietly slips in under the word that goes by so casually—“creative.” The ability to make the ordinary extraordinary is precisely the most mysterious talent of the artist. (Cf. Shelley’s transfiguration of the exhausted vocabulary, the feeblest clichés, of eighteenth-century poetry—“fair,” “dear,” “sweet,” “faint,” etc. [Massey 1969: 2].)

The upshot of Veale’s effort—and, on his way to his conclusions, he provides a very thorough rhetorical analysis and survey of various kinds of metaphor—is the creation of a thesaurus of metaphor which, he assumes, aspiring authors will be eager to consult. It will be “a treasury of readymade [sic] expressions ... for those who retrieve them” (2012: 154). I am reminded of the story (no doubt apocryphal) of the French poet who would shout a word to his brother who lived upstairs and receive a string of rhyme words in response. Speaking more seriously, I would say that Veale’s proposal recalls the dictionaries of musical effects compiled by some eighteenth-century musical theorists, such as Johann Matheson. Nowhere does Veale seem to realize that metaphor is not primarily an embellishment, but an instrument of thought, integral to the mental process itself, essential for the production of ideas.

One of the things that the “demystifiers” do not seem to understand is that a metaphor conveys something that its paraphrase cannot: otherwise, why bother with the metaphor? They appear to begin with the assumption that, in the genesis of a metaphor, there is a core meaning that you then modify or embellish. They do not understand that a metaphor is a metaphor *ab initio*.

It may be countered that the study of metaphor in which scholars such as Barnden and Veale are engaged is nothing more than a harmless, if particularly detailed and analytic, branch of rhetoric. In the end, it may not have any more deleterious effect on thought and experience than the development of machine-generated poems has had on poetry, or, for that matter, than the earlier studies of narrativity by scholars such as Propp and Greimas have had on storytelling. Everyone realizes that to have a computer write, say, a sonnet on the Forth Bridge (one of Turing’s examples—a feat now easily achievable [1950: 434]), one would first have to teach it what a poem is. But the fact is that, like a slime mold, and like other forms of AI, this branch has revealed unexpected powers of locomotion, showing up in areas where its appearance was least anticipated or desired. Were we really waiting for the emergence of computer-assisted metaphors as a spur to creativity? Or as an antidote for the failure of

⁶ Would it be possible to find, or create, some connection between the “superfluous” elements in metaphor and the “non-robust features” of AI? See Buckner (2020).

imagination? What would it be for? One can imagine some laboratory assistant forgetting to switch off the metaphor-generating machine so that it would go on producing metaphors (or pick-up lines, or any other verbal configuration) by the dumpster-load, long after mankind itself had become a hollow memory. How can such an approach avoid making trash of what it was supposed to illuminate? Its true objective is to destroy creativity by defining that which would cease to exist in the moment of its definition.

BOX 2

It is only partially in jest that I would venture the following assertion: The ability to recognize metaphor is the unique and indispensable human characteristic. *Metaphoram agnosco, ergo humana/us sum*. This is what defines our species.

The fact that this is the defining characteristic of our species does not imply that those who lack this faculty are not human, or are less human than those who have it. All it means is that certain members of the species (perhaps a majority) own this characteristic, as a kind of badge: they are the carriers of this special faculty, like a unique color, or shape of the ears, that is not found in others. Nor is it a sufficient marker of human identity: it is just a special feature, and no privileged status or honor is attached to it. We usually define the human not on grounds of mental or intellectual capacity, but on emotional grounds. We usually think of the essentially human as the ability to feel a strong empathy for others of our species who are experiencing difficulties, even, and particularly, for those who lack certain faculties that others possess. We emphasize what we have in common with them. But anyone who has seen a cow bellow for help in finding her missing calf, or defending a bull that she has fallen in love with, will know that such an impulse is not peculiar to those that we call human beings. It seems odd that we should naturally identify those very characteristics that we share with other animals as being the distinguishing mark of the human.

A method to determine whether any other animal is capable of recognizing metaphor, in any form, has not yet been devised.

This would be a significant area of research. The fact is that many animals have been taught some version of human language, no matter how limited, and the tendency to physical imagery in such languages may make them particularly susceptible to metaphoric configurations; whether the animals that produce such locutions experience them as metaphoric is another question. Human sign language might also be a special area of investigation, especially since, in that form of communication, different words are often used to indicate that the signer's intention is either literal or metaphoric (as in "swine" vs. "pig" in English). The issue would be further complicated if we were to consider play, as well as humor in general, as having metaphorical aspects.

One consequence of raising the question of what is essentially human is that it forces us to recognize, in still another context, how much we have in common with other animals.

2.1 Supplement #1: a witness

7/4/20. For me, the following is important:

On Wednesday, July 1, 2020, I had a visit from a friend of mine of the English department at a nearby university. I had been corresponding with this friend about the Turing test, and he had expressed his inability to understand what I meant by being able to apprehend a metaphor, e.g., "He has a green thumb," alternately as a metaphor and literally, i.e., as nonsense. (The second condition is the one in which autistic people presumably find themselves.) As we continued talking about the subject, in my garden, my friend kept bringing up objections—linguistic, logical, etc. etc., to the whole idea, not only of such switching, but even of apprehending a metaphor literally. The background for my friend's objection can be found in the respectable philosophical strain, running from Vico through Nietzsche, which maintains a metaphoric basis for language as a whole, with additional emphasis on cat-achresis. While finding much to approve in this argument, I still find a distinction that remains to be accounted for between, say, "With rue my heart is laden" (Housman) and "I am unhappy," or between "She has brought her burden from the West" (if I recall correctly, Synge) and "She has had a baby." It seems that we have reinstated a boundary, no matter how difficult to define, between the figurative and the literal.

In any case, suddenly, in the midst of our argument about the impossibility of differentiating clearly enough between metaphorical and literal meaning even to make such distinctions, much less to enact them, I realized that my friend was doing exactly what he had been saying was out of the question—he was giving example after example of the kind of switching that I had been talking about and that he had been saying could not be done. He was alternating effortlessly between the literal and the figurative meanings of "have a green thumb." I'm not sure that my friend accepted fully the fact that he had been doing what he had been saying was impossible, but voila! He was doing it! The fact that my friend claims that he is now (April 2021) stuck in the "on" position, unable to resolve a metaphor into nonsense, does not reduce the importance of his previous feat.

This is of great importance to me because it proves that I am not unique in having, or, rather, in having learned, this capacity, and that someone else could serve as an experimental subject in such a study. This possibility should enable researchers, with appropriate equipment, to see clearly at the neurological level what distinguishes autists from those who experience metaphors as such.

BOX 3

Perceiving a Metaphor. Throughout this essay, I have been speaking of experiencing, or apprehending, metaphor as metaphor and perceiving metaphor as nonsense. Here an interesting issue can be seen forming. It is partly a matter of terminology, but that terminology reveals a minute flaw in the very nature of epistemology. Is there such a thing as an aesthetic “percept” to begin with? It is clear enough that, when an aesthetist perceives, even if only by means of mental representation, that someone has a green thumb, it is perfectly appropriate to speak of perception. On the other hand, when someone experiences that same phrase as a metaphor, that object of perception disappears, as by sleight of hand. It vanishes, to be replaced, in a mental manoeuvre, by something that is not at all “perceived.” Exactly what that is no one can say: it is the secret of metaphor, perhaps of the aesthetic as such; a palimpsest of words over meaning. (I have spoken before of the “tenor,” in the background, that cannot be exorcised from metaphor.) What becomes apparent, though, is that such a metaphor is essentially verbal, not visual: in the phrase “John has a green thumb,” we do not visualize a thumb, much less a green one. In the metaphor these words, important as they are, are in the service of something else; they lose their denotational value or competence. The material, or perceptual, content of the words is elided.

It is true that different metaphors evoke different degrees of visualization, from “chew the fat” or “green thumb,” to the situation in which Odysseus, clutching at pebbles to avoid being swept out to sea, is compared to an octopus. Still, metaphors do not demand or even call upon us to visualize: who, on reading Housman’s “With rue my heart is laden/For golden friends I had” visualizes a heart carrying rue (whatever plant rue may be), or sees “golden” friends? One might say, in this case, there isn’t even anything to perceive. This is why it may be misguided to ask someone (say, a student), to visualize anything in a poem.

A recent example, for me: a former student wrote me a long, rambling email, mainly to occupy the time during the Covid-19 lockdown, consisting of reminiscences of student days, difficulties in writing, and other trivia. I was having some trouble following his train of images and thoughts, and was somewhat bored, when I came upon his last sentence. I had a sudden feeling of relief: at last, here is a part of a sentence that I don’t have to understand, that I don’t have to figure out. Paradoxically, it is more vivid than what precedes it, but I’m not required to envisage it. It’s simply a good clause. The last eight words: “of sending whatever gift may be wrapped inside,” had had their effect on me without having to be deciphered, unlike all the preceding talk. “This moment, this realization that whoever does the writing you’re reading is my companion, whenever I decide to engage with the hard discipline of saying what is on my mind and of sending whatever gift may be wrapped inside.”

Instead of feeling the stress, the “hard discipline” of being called upon to visualize, or “perceive,” what was happening in that last clause, I felt the opposite: a feeling of relaxation, a relief from responsibility, as the burden of perception was lifted.

2.2 Supplement #2: the question of bibliography

I have not attempted to master the vast literature on the Turing test or Turing’s other writings. I have done only limited reading in the area, confined to such relevant classics as John Searles’s (2014) and Hubert Dreyfus’s (1992)

writings on this subject (though Dreyfus was once a colleague of mine) and articles such as Diane Proudfoot’s “Rethinking Turing’s test and the philosophical implications” (2020) and Robert A. Cantrick’s “AI’s Clockwork Orange” survey (a recent unpublished MS). I would not even venture an opinion about the basic thesis of Turing’s famous article of 1950, which is, incidentally, passing strange as a piece of writing, in ways that have nothing to do with AI: Turing seems to argue that to question his thesis, whatever that may be, is tantamount to saying that a black man and a white man cannot engage in an intimate relationship. I will leave it to others to decide whether Turing was claiming that a computer can do anything that a human can do, or whether he was only asserting that, under certain specified circumstances, a reasonable judge would be unable to distinguish between the responses of a computer and a human subject. (The Proudfoot article seems to lean towards the latter conclusion.) I have looked into Wendy Hui Kyong Chun’s book *Programmed visions* (2011), and her student Andrew Lison’s “Convolute n(eural)” (a book chapter in MS). Lison’s work is too technical for me to have gleaned more than a superficial understanding of it. In the one chapter of his book-in-progress that I have seen, he argues that AI, for all its impressive achievements, is a field of waning importance and diminishing returns; in fact, he believes that Hubert Dreyfus’s critique of the whole AI enterprise is still valid.

The reason why I do not feel obligated to immerse myself in the secondary Turing material is that the finer aspects of the argument do not concern me. As I have said above, I became involved in the question of the validity, or lack thereof, of the Turing test by the remotest accident, having nothing to do with logic, with AI, or with Turing. This question originated in a completely personal, and even private, question in aesthetics: I was trying to understand my reactions to a poem. I did not start out by looking for rational objections to the Turing test: in fact, Turing was the last thing on my mind. I had been told that a particular poem was a bad poem, hackneyed and colorless, but I loved the poem. Trying to understand the position of the hostile critic, I realized that I was sometimes able to see the poem as just a string of foolish phrases, which read, basically, as nonsense, and, alternatively, as the inspired, metaphorical expression of true feeling that I felt it to be. Thinking about the nature of this switch, from the literal to the metaphorical, I realized that it was the sort of change that could not be prescribed or even described; this, the basic aesthetic gesture, remains beyond the boundary of logical definition. It then dawned on me that it might provide a test case for the validity of a Turing test, by any definition: can a computer track a mind as it goes through this transformation? Here we are in the realm

of pure subjectivity. There is no objective standard by which we can dictate the move that enables us to see the poem as what it is, if that is what it is: as a poem, not as a string of nonsensical assertions. No amount of studying the literature about, or parsing of the exact meaning of the Turing test, will either advance or detract from this argument.

Since my approach is psychological, not logical, the simplest form of the claim serves my purpose best: a computer cannot imitate one of the major functions of the human mind. My intention is to show that a computer cannot deal successfully with a crucial aspect of human language and thought.

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