

# Thinking Without Words

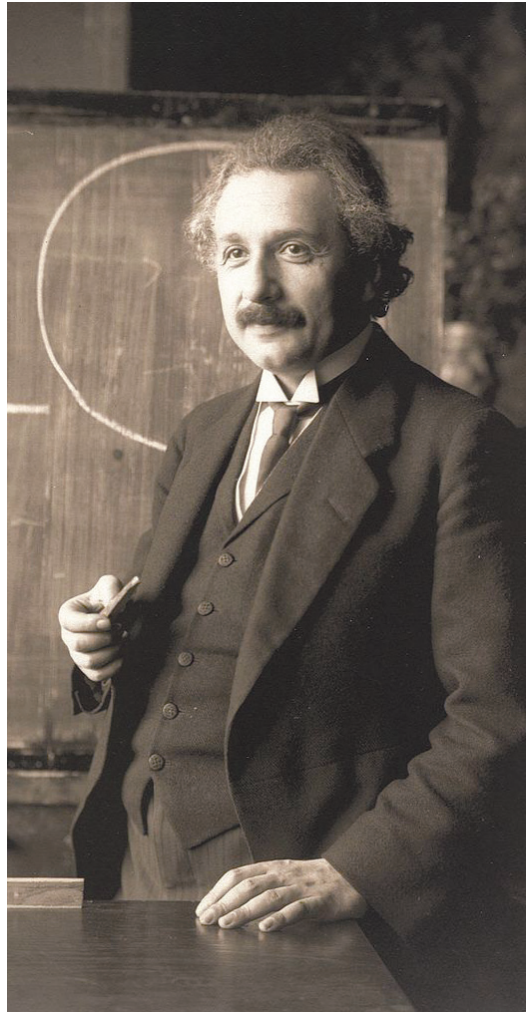
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**D**o you think about how you think? How does it occur? Do you think in sequence of logical steps? If you were to write out a thought, would what you wrote reflect how you came to your idea? Is the end product the same as your thought process? To be clear, we're not talking about just any type of thoughts, such as impressions, a memory, a simple opinion or an urge, but a principled discovery; something you would consider a profound and fundamental idea. If you're a teacher, or have tried to communicate a complex idea, these questions have come up before naturally to you. Did you find with students or another audience, that you really couldn't "just say it" and expect them to understand the idea? That explaining it doesn't get them to think it for themselves either?

The issue of discovering and communicating ideas has been addressed quite explicitly throughout our publications.<sup>1</sup> I

1. <http://www.larouchepac.com/node/21237>, <http://www.larouchepac.com/metaphor-intermezzo> and <http://www.larouchepac.com/node/21206>.



Picture by F. Schmutzer

*Albert Einstein, teaching in 1921.*

would like to add to this discussion the simple question: in what form do your thoughts occur? Do they appear in words? Or other types of sensed objects? Does a data ticker scroll through your brain? Or is it more like scenes from a movie? Before further analyzing ourselves, let's look to another mind. Let's ask Albert Einstein how he thinks:

"No really productive man thinks in such a paper fashion. The way the two triple sets of axioms are contrasted in the Einstein-Infeld book is not at all the way things happened in the process of actual thinking. This was merely a later formulation of the subject matter, just a question of how the thing could afterwards best be written. These thoughts did not come in any verbal formulation. I very rarely think in words at all. A thought comes, and I may try to express it in words afterward. ... During all those years there was a feeling of direction, of going straight toward something concrete. It is, of course, very hard to express that feeling in words; but it was decidedly

the case, and clearly to be distinguished from later considerations about the rational form of the solution.”<sup>2</sup>

In another instance Einstein addresses the same question:

“The words or the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The psychological entities which seem to serve as elements in thought are certain signs and more or less clear images which can be voluntarily reproduced and combined. This combinatory play seems to be the essential feature in productive thought—before there is any connection with logical construction in words or other kinds of signs which can be communicated to others. The above mentioned elements are, in my case, of visual and some of muscular type. Conventional words or other signs have to be sought for laboriously only in a secondary stage, when the mentioned associative play is sufficiently established and can be reproduced at will.”<sup>3</sup>

And to sum it up most succinctly:

“I have no doubt that our thinking goes on for the most part without the use of symbols, and, furthermore, largely unconsciously.”<sup>4</sup>

If Einstein doesn’t think in words, then how does he think? He hinted at it already with bringing up the process of “play” and voluntary synthesis or combination of thoughts. The discovery of a new idea can be related to a surprise, the eureka moment. To accomplish this, the imagination cannot be constrained by fixed answers or characterizations, but has to be able to fly past the shadows of experience (the objects that can be pointed to and named), to the unseen. So, if not words, by what means does Einstein think? He pointedly says: “I often think in music.” What does it mean to think in terms of music? Does he have chords constantly playing in his head? Does he see sheet music in his mind?

“... when we communicate through forms whose connections are not accessible to the conscious mind, yet we intuitively recognize them as something meaningful—then we are doing art.”<sup>5</sup>

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2. Wertheimer, Max, *Productive Thinking*, University of Chicago (1982)

3. Hadamard, Jacques *The Psychology of Invention in the Mathematical Field* Appendix II, A Testimonial from Professor Einstein (1944)

4. Einstein, Albert *Autobiographical Notes* (1946)

5. Einstein, Albert “The Common Element in Artistic and Scientific Experience,” from the journal *Menschen* (February 1921)

This would seem to indicate that music is closer to the subconscious thought process than any other system of language and therefore closer to the more ideal parts of thought. This makes sense in relation to what Einstein said earlier, about his thoughts being directed, pulled on as if from outside, to the correct destination. The same thing happens in the unfolding of a well-composed piece of music. As has been noted elsewhere, good classical music is a reflection of the tension and resolution that goes into grappling with paradoxes. Hence Einstein would say: “Every great scientist is an artist.”

As put by one of his biographers:

“[Music] was not so much an escape as it was a connection: to the harmony underlying the universe, to the creative genius of the great composers, and to other people who felt comfortable bonding with more than just words.”<sup>6</sup>

Others would agree: To get a better idea of what thinking in terms of music, as opposed to words, means, let’s turn to a contemporary of Einstein’s, V.I. Vernadsky:

“Music seems to me to be the deepest expression of human consciousness, for even in poetry, in science, and in philosophy, where we are operating with logical concepts and words, Man involuntarily and always limits—and often distorts that which he experiences and understands. Within the bounds of Tyutchev’s, ‘a thought once uttered is untrue.’ In music, we maintain unuttered thoughts....It would be quite interesting to follow in a concrete way the obvious influence of music on scientific thought. Does it excite inspiration?”<sup>7</sup>

It is common to associate moods or feelings with certain harmonies or keys, like a minor key as melancholy, but what we’re talking about here in classical music are thoughts that could not be expressed otherwise. Thoughts so deep and eternal that they are outside the customary language culture. They both precede and are higher than what can be obtained in a conversation, putting music closer to the innate ideas of the soul.

A more explicit discussion of words versus music to express a true idea is taken up by Felix Mendelssohn in composing ‘songs without words;’ as a clear polemic against

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6. Isaacson, Walter *Einstein: His Life and Universe* Simon & Schuster (2007)—*Emphasis added*.

7. Vernadsky’s Thoughts and Sketches: Les musiciens ne font que commencer à connaître la jouissance du sens historique [Musicians are only beginning to understand the pleasure of the sense of history] ~ Landowska, W. *Musique ancienne*. P., 1909, p.129. Translated by Bill Jones. Vernadsky’s question has been addressed in another place by this author.

belittling music to mere tonal painting of pastoral scenes, or to a mimicry of a sensual poem:

“People often complain that music is ambiguous, that their ideas on the subject always seem so vague, whereas everyone understands words; with me it is exactly the reverse; not merely with regard to entire sentences, but also as to individual words; these, too, seem to me so ambiguous, so vague, so unintelligible when compared with genuine music, which fills the soul with a thousand things better than words. What the music I love expresses to me, is not thought too *indefinite* to be put into words, but, on the contrary, too *definite*. . . . If you ask me what my idea is, I say—just the song as it stands; and if I have in my mind a definite term or terms with regard to one or more of these songs, I will disclose them to no one, because the words of one person assume a totally different meaning in the mind of another person, because the music of the song alone can awaken the same ideas and the same feelings in one mind as in another,—a feeling which is not, however, expressed by the same words.<sup>8</sup> Words have many meanings, and yet music we could both understand correctly. Will you allow this to serve as an answer to your question? At all events, it is the only one I can give—although these too are nothing, after all, but ambiguous words!”<sup>9</sup>



Painting by James Warren Childre, 1829

Felix Mendelssohn Bartholdy at age 30.



Photograph by Pierre Petit

Richard Wagner, the anti-Semite, in 1861.

There exist pure thoughts, musical thoughts, that can't be translated into words. These are the closest to preconscious thoughts and processes. The people that Felix says complain about music are not secure in thinking of principles that are above sense perceptions. They would be grateful to be given a handbook to life to follow, as if they were obeying a parking sign. But would these types of people be developed enough mentally to understand something

as universal as gravity, which cannot be sensed directly, nor be described (in terms of what causes its effects), by equations or a basic definition, and doesn't exist itself as an object, but is most real and powerful? Would someone in this state or with this capacity be able to understand something as ethereal as love? They would miss the meaning of both these concepts were they to look them up in a dictionary, though they cannot deny their existence and influence.

The same Richard Wagner who attacks Mendelssohn for being a Jewish musician corrupting German romantic music with intellect, criticizes Beethoven's 9th symphony, by

saying that the music does not match the words. Furtwängler, the greatest conductor of the 20th century, defends Beethoven from:

“...the fallacy which results from attempting to record the idea rationally in words—a task which is, of course, impossible without sacrificing the substance of the idea to a very considerable extent. . . . Beethoven more than anyone else had an urge to express everything in a purely musical form. The musician in him

8. Goethe also says, in the fourth part of 'Dichtung und Wahrheit,' "I have already but too plainly seen, that no one person understands another; that no one receives the same impression as another from the very same words."

9. Felix Mendelssohn Bartholdy to Marc-André Souchay, Luebeck [Herr Souchay had asked Mendelssohn the meanings of some of his "Songs without Words."] Berlin, October 15th, 1842. William Empson would agree, though he considered it a tool, rather than a hindrance to express ideas.



felt inhibited, not inspired by a text: he would not allow the textual form of a word to dictate to him what form his music should take. Thus Beethoven becomes completely himself only when he is free to follow exclusively the inherent demands of music."<sup>10</sup>

We should recognize Beethoven's desire to be free from any "textual form of a word" and to live on the musical thought, as similar to Einstein's concept of play and unconscious thought. From this we can gather that music is not limited to an *expression* of imaginative ideas, but is actually man's creation to model the highest, most productive and organic thought process; to become more conscious of it and have more power to wield it.

Johannes Kepler discovered that the musical harmony man uses to externalize his creative mind, is also found in shadow form in the solar system, the creative expression of God's mind. Maybe the well-tempered system as we know it today is best at communicating genuine ideas, because it's a reflection and bounded by physical principles and laws, unlike simple words. You could say that classical music is the



Johannes Kepler in 1610

closest the subjective gets to the "objective." Human thought and expression, as noted by Einstein, can be stated as the being and becoming. We start with the living absolute, an ideal, say a discovery, and then try to communicate it by assembling parts which most approach a representation of our idea. In physical science we're given the shadow first (an observation of experience or some other evidence, the parts or the becoming), and have to work backwards to know the idea which generated it.

"Thus it is no longer surprising that Man, aping his Creator, has at last found a method of singing in harmony which was unknown to the ancients, so that he might play, that is to say, the perpetuity of the whole of

cosmic time in some brief fraction of an hour, by the artificial concert of several voices, and taste up to a point the satisfaction of God his Maker in His works by a most delightful sense of pleasure felt in this imitator of God, Music..."<sup>11</sup>

To conclude (if this can be done in words): The true scientific imagination is (at least) non-verbal. In order to free our minds from literal thinking, we have to ask ourselves: Does the way language is currently used bound our thinking? Do we let an internal teleprompter tell us what to think? We understand that language is useful and necessary for explaining things to others, but is it sufficient? Is it sufficient for true higher thinking? We see with Einstein that the secret to science is to go beyond language. The secret that humanity has developed for thinking about how we think, is classical music. We use music as a model of pure thought; as a tool for willful creativity, allowing for reflection and improvement of our thinking. This leaves me with the question: Is thinking not only non-verbal, but is it non-visual as well? Is thinking non-sensual entirely?

10. Furtwängler, Wilhelm *Concerning Music* (1953). This is not to say that Beethoven was not inspired by actual poetry, but is only an emphasis on the fact that Beethoven is superior to someone like Wagner because he was not operating on story-lines, what could be called "program music," or more recently, movie music. A fuller discussion of the difference between an idea in prose being the summation of the words used, versus poetry, being a non-linear effect outside the words and yet using entirely lawful means, and poetry's relation to music, will have to be taken up someplace else; but can be found in part in the works on this site referenced above, and in the works of Shelley, Keats, Shakespeare and Schiller. It should be just as provoking to ask if you think poetically, as it is to ask if you think musically, as oppose to thinking in words merely. Here's an excerpt for anyone interested in trying to make sense of the Wagner quote from his essay Beethoven:

"Neither is it the thought expressed in Schiller's verses, that occupies our minds thereafter, but the familiar sound of the choral chant; in which we ourselves feel bidden to join... In fact it is obvious, especially with the chief-melody proper, that Schiller's words have been built in perforce and with no great skill; for this melody had first unrolled its breadth before us as an entity per se, entrusted to the instruments alone..."

11. Kepler, Johannes, *Harmonices Mundi* (1618)