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UTOPIAN FOR BEGINNERS

An amateur linguist loses control of the language he invented.

By Joshua Foer

Quijada's invented language has two seemingly incompatible ambitions: to be maximally precise but also maximally concise.

There are so many ways for speakers of English to see the world. We can glimpse, glance, visualize, view, look, spy, or ogle. Stare, gawk, or gape. Peek, watch, or scrutinize. Each word suggests some subtly different quality: looking implies volition; spying suggests furtiveness; gawking carries an element of social judgment and a sense of surprise. When we try to describe an act of vision, we consider a constellation of available meanings. But if thoughts and words exist on different planes, then expression must always be an act of compromise.

Languages are something of a mess. They evolve over centuries through an unplanned, democratic process that leaves them teeming with irregularities, quirks, and words like "knight." No one who set out to design a form of communication would ever end up with anything like English, Mandarin, or any of the more than six thousand languages spoken today.

"Natural languages are adequate, but that doesn't mean they're optimal," John Quijada, a fifty-three-year-old former employee of the California State Department of Motor Vehicles, told me. In 2004, he published a monograph on the Internet that was titled "Ithkuil: A Philosophical Design for a Hypothetical Language." Written like a linguistics textbook, the fourteen-page Web site ran to almost a hundred and sixty thousand words. It documented the grammar, syntax, and lexicon of a language that Quijada had spent three decades inventing in his spare time. Ithkuil had never been spoken by anyone other than Quijada, and he assumed that it never would be.

In his preface, Quijada wrote that his "greater goal" was "to attempt the creation of what human beings, left to their own devices, would never create naturally, but rather only by conscious intellectual effort: an idealized language whose aim is the highest possible degree of logic, efficiency, detail, and accuracy in cognitive expression via spoken human language, while minimizing the ambiguity, vagueness, illogic, redundancy, polysemy (multiple meanings) and overall arbitrariness that is seemingly ubiquitous in natural human language."

Ithkuil has two seemingly incompatible ambitions: to be maximally precise but also maximally concise, capable of capturing nearly every thought that a human being could have while doing so in as few sounds as possible. Ideas that could be expressed only as a clunky circumlocution in English can be collapsed into a single word in Ithkuil. A sentence like "On the contrary, I think it may turn out that this rugged mountain range trails off at some point" becomes simply "*Tram-mļöi hhâsmařpţuktôx*."

It wasn't long after he released his manuscript on the Internet that a small community of language enthusiasts began to recognize what Quijada, a civil servant without an advanced degree, had accomplished. Ithkuil, one Web site declared, "is a monument to human ingenuity and design." It may be the most complete realization of a quixotic dream that has entranced philosophers for centuries: the creation of a more perfect language.

Ithkuil's first piece of press was a brief mention in 2004 in a Russian popular-science magazine called *Computerra*. An article titled "The Speed of Thought" noted remarkable similarities between Ithkuil and an imaginary language cooked up by the science-fiction writer Robert Heinlein for his novella "Gulf," from 1949. Heinlein's story describes a secret society of geniuses called the New Men who train themselves to think more rapidly and precisely using a language called Speedtalk, which is capable of condensing entire sentences into single words. Using their efficient language to communicate, the New Men plot to take over the world from the benighted "homo saps."

Soon after the publication of the Russian article, Quijada began to receive a steady stream of letters from e-mail addresses ending in .ru, peppering him with arcane questions and requesting changes to the language to make its words easier to

pronounce. Alexey Samons, a Russian software engineer based in Vladivostok, took on the monumental task of translating the Ithkuil Web site into Russian, and before long three Russian Web forums had sprung up to debate the merits and uses of Ithkuil.

At first, Quijada was bewildered by the interest emanating from Russia. "I was a third humbled, a third flattered, and a third intrigued," he told me. "Beyond that, I just wanted to know: who are these people?"

In early 2010, he was forwarded an e-mail in patchy English from a Ukrainian academic named Oleg Bakhtiyarov, who introduced himself as the director of a recently formed institution of higher education in Kiev called the University of Effective Development, and as a leading proponent of a philosophical movement called psychonetics. When Quijada Googled both Bakhtiyarov and psychonetics, he found "a sea of impenetrable jargon" about "efforts to develop the human mind using a mix of Western and Eastern ideas," but nothing that made him suspicious of the group's motivations. The e-mail invited Quijada to participate in a conference titled "Creative Technology: Perspectives and Means of Development," which was to be held that July in Elista, the capital of the Republic of Kalmykia, a small semi-autonomous state in the Russian Federation, situated on the arid western shore of the Caspian Sea.

"From our viewpoint, creation of the Ithkuil language is one of the basic aspects for development of creative thinking," Bakhtiyarov wrote to Quijada. "One can hardly learn enough about the Ithkuil language from the Russian scientific print editions."

Ithkuil did not emerge from nowhere. Since at least the Middle Ages, philosophers and philologists have dreamed of curing natural languages of their flaws by constructing entirely new idioms according to orderly, logical principles. Inventing new forms of speech is an almost cosmic urge that stems from what the linguist Marina Yaguello, the author of "Lunatic Lovers of Language," calls "an ambivalent love-hate relationship." Language creation is pursued by people who are so in love with what language can do that they hate what it doesn't. "I don't believe any other fantasy has ever been pursued with so much ardor by the human spirit, apart perhaps from the philosopher's stone or the proof of the existence of God; or

that any other utopia has caused so much ink to flow, apart perhaps from socialism," she writes.

The first entirely artificial language of which any record survives, Lingua Ignota, was created by the twelfth-century German nun and mystic Hildegard von Bingen, who is better known for having composed what may be the earliest surviving morality play. She seems to have used Lingua Ignota for some form of mystical communion. All that remains of her language is a short passage and a dictionary of a thousand and twelve words listed in hierarchical order, from the most important (*Aigonz*, God) to the least (*Cauiz*, cricket).

More than nine hundred languages have been invented since Lingua Ignota, and almost all have foundered. "The history of invented languages is, for the most part, a history of failure," Arika Okrent, the author of "In the Land of Invented Languages," writes. Many of the most spectacular flops have been languages, like Ithkuil, that attempt to hold a perfect mirror up to reality. In the seventeenth century, European philosophers like Francis Bacon, René Descartes, and Gottfried Leibniz were fascinated by the ways in which natural languages clouded human thought, and wondered if an artificial substitute could more accurately capture the true essence of things. In the previous century, Jesuit missionaries had brought back the first substantial accounts of the Chinese language, and many philosophers were taken with the notion that its characters signified concepts rather than sounds, and that a single ideogram could have the same meaning to people all over East Asia, despite sounding completely different in each tongue. What if, they wondered, you could create a universal written language that could be understood by anyone, a set of "real characters," just as the creation of Arabic numerals had done for counting? "This writing will be a kind of general algebra and calculus of reason, so that, instead of disputing, we can say that 'we calculate,' " Leibniz wrote, in 1679.

Ithkuil's conceptual pedigree can be traced back to Leibniz, Bacon, and Descartes, and especially to a seventeenth-century bishop and polymath, John Wilkins, who tried to actualize their lofty ideals. In his "Essay Towards a Real Character, and a Philosophical Language," from 1668, Wilkins laid out a sprawling taxonomic tree that was intended to represent a rational classification of every concept, thing, and action in the universe. Each branch along the tree corresponded to a letter or a syllable, so that assembling a word was simply a matter of tracing a set of forking

limbs until you'd arrived on a distant tendril representing the concept you wanted to express. For example, in Wilkins's system, *De* signifies an element, *Deb* is fire, and *Debα* is a flame.

The natural philosopher Robert Hooke was so impressed by Wilkins's language that he published a discourse on pocket watches in it, and proposed that it be made the lingua franca of scientific research. That never happened. The language was simply too burdensome, and it soon vanished into obscurity. But Wilkins's taxonomic-classification scheme, which organized words by meaning rather than alphabetically, was not entirely without use: it was a predecessor of the first modern thesaurus.

By the nineteenth century, the dream of constructing a philosophical language capable of expressing universal truths had given way to the equally ambitious desire to unite the world through a single, easy-to-learn, politically neutral, auxiliary language. Solresol, the creation of a French musician named Jean-François Sudre, was among the first of these universal languages to gain popular attention. It had only seven syllables: Do, Re, Mi, Fa, So, La, and Si. Words could be sung, or performed on a violin. Or, since the language could also be translated into the seven colors of the rainbow, sentences could be woven into a textile as a stream of colors.

Esperanto, which was invented in the eighteen-eighties by L. L. Zamenhof, a Jewish doctor from Białystok, was by far the most successful of a hundred or so universal languages invented in the nineteenth century. At its peak, it had as many as two million speakers, and produced its own rich literature, including more than fifteen thousand books.

Two world wars and the ascent of global English punched an irreparable hole in the Esperantists' dream of creating a universal language. Like every other attempt to undo the tragedy of Babel, Esperanto was ultimately a failure. And yet, by some estimates, Esperanto still has more speakers than six thousand of the languages spoken around the world today, including approximately a thousand native speakers (among them George Soros) who learned it as their first language.

John Quijada was born in Los Angeles to first-generation Mexican-Americans and grew up in the white-flight suburb of Whittier, where he attended Richard

Nixon's junior high school. His father, a Yaqui Indian, was a printer who made the sale signs that hung in grocery-store windows. At night, he painted landscapes.

Quijada's entry into artificial languages was inspired by the utopian politics of Esperanto as well as by the import bin at his local record store, where as a teen-ager, in the nineteen-seventies, he discovered a concept album by the French prog-rock band Magma. All the songs were sung in Kobaïan, a melodic alien language made up by the group's eccentric lead singer, Christian Vander.

"For someone to actually get onstage and unapologetically sing these gargantuan, operatic, epic songs, it made me realize, shit . . . I've got to do this," Quijada told me. At fifteen, he created Mbozo, the first of his many invented languages, "a relexified generic Romance/Germanic hybrid with African-like phonology." Another one, Pskeoj, had a vocabulary that was pounded out randomly on a typewriter.

Quijada enrolled at California State University, Fullerton, when he was eighteen, planning to become a linguistic anthropologist. "I dreamed of becoming the guy who goes into the Amazon and learns a language that no outsider can speak," he said. He spent hours in the library poring over descriptions of the world's most exotic languages, and becoming a connoisseur of strange grammars.

"I had this realization that every individual language does at least one thing better than every other language," he said. For example, the Australian Aboriginal language Guugu Yimithirr doesn't use egocentric coördinates like "left," "right," "in front of," or "behind." Instead, speakers use only the cardinal directions. They don't have left and right legs but north and south legs, which become east and west legs upon turning ninety degrees. Among the Wakashan Indians of the Pacific Northwest, a grammatically correct sentence can't be formed without providing what linguists refer to as "evidentiality," inflecting the verb to indicate whether you are speaking from direct experience, inference, conjecture, or hearsay.

Inspired by all the unorthodox grammars he had been studying, Quijada began wondering, "What if there were one single language that combined the coolest features from all the world's languages?" Back in his room in his parents' house, he started scribbling notes on an entirely new grammar that would eventually incorporate not only Wakashan evidentiality and Guugu Yimithirr coördinates but

also Niger-Kordofanian aspectual systems, the nominal cases of Basque, the fourth-person referent found in several nearly extinct Native American languages, and a dozen other wild ways of forming sentences.

"Originally, I was going to get a Ph.D., when I was bright-eyed and full of dreams, but reality set in. I was too poor to go to grad school," he told me. "I'd never heard of Pell grants or any other kind of grant, nor did the idea of the government giving people money to go to grad school ever cross my mind as something consistent with reality." At the age of twenty-one, Quijada walked in on his devoutly religious mother describing him as "a good Catholic boy" to his uncle and aunt. "She was totally misrepresenting me," he recalls. "In fact, I was, at the time, agnostic." (Two years later, he declared himself an atheist, and now considers himself a pantheist.) "At that point in my life, it was very important to me that people understand me, and I felt that my parents didn't really understand me," he said. After a subsequent fight, he stormed out the door, and didn't speak to his parents for five years. Unable to afford school on his own, he took a job as a truck driver, and then one at the D.M.V., planning to return to academia once he'd saved enough money.

"For an eight-year period I consciously, through sheer will, did my best to become a different person: that slick, yuppie man-about-town that I always aspired to be in high school," Quijada said. "But the victories were all hollow and short-lived. Pretty soon I'm introspective enough to realize this formula is shallow. At thirty, I renounced that other me and I went back to being me."

Quijada worked his way up to middle management at the D.M.V. in Sacramento, eventually overseeing its Web site. "There were always these incentives to keep grad school on the back burner, and then one day I realized it wasn't even on the stove anymore," he said. Instead, Quijada indulged his interest in academic linguistics by making an annual pilgrimage to Cody's, a legendary bookstore in Berkeley, to pick up the latest titles. In his spare time, he continued to work on Ithkuil, filling memo pads with notes on a more perfect idiom.

It was on one of those pilgrimages that he discovered "Metaphors We Live By," a seminal book, published in 1980, by the cognitive linguists George Lakoff and Mark Johnson, which argues that the way we think is structured by conceptual systems that are largely metaphorical in nature. Life is a journey. Time is money. Argument is

war. For better or worse, these figures of speech are profoundly embedded in how we think.

For Quijada, this was a revelation. He imagined that Ithkuil might be able to do what Lakoff and Johnson said natural languages could not: force its speakers to precisely identify what they mean to say. No hemming, no hawing, no hiding true meaning behind jargon and metaphor. By requiring speakers to carefully consider the meaning of their words, he hoped that his analytical language would force many of the subterranean quirks of human cognition to the surface, and free people from the bugs that infect their thinking.

"As time went on, my goal began changing," he told me. "It was no longer about creating a mishmash of cool linguistic features. I started getting all these ideas to make language work more efficiently. I thought, Why don't I just create a means of finishing what all natural languages were unable to finish?"

Quijada wrote Lakoff an e-mail, introducing himself as "a great admirer, reader, and fan," and "humbly inform[ing] you of a project . . . which you might, time permitting, find of interest." He went on to describe how his understanding of Lakoff's groundbreaking work in cognitive linguistics formed the conceptual basis of Ithkuil, and ended with a personal note of affection. "As someone with a lifelong passion for linguistics who, through personal/financial circumstances did not get to pursue my dream of [a] career in linguistics, I am grateful [to] you and your colleagues for fighting the battle for me, and I hope I live to see the full flowering of the cognitive revolution in science you have helped to start." Lakoff never responded.

In 1997, when Quijada ran his first Web search for invented languages, he discovered that his strange passion was in fact shared by others. He found a newsgroup that was populated by amateur linguists from all over the world, who were excitedly conversing about new ways of conversing. "I was like, 'Oh, my God, I'm not alone!' " he recalled.

These linguistic hobbyists call themselves "conlangers" (referring to "constructed language") and hold an occasional conclave called the Language Creation Conference. It was at the second of those conferences, in 2007, on the campus of U.C. Berkeley, that I first met Quijada. Amid two dozen men and seven women

dressed in kilts, top hats, and kimonos, the quietly aloof Quijada stuck out like an umlaut in English. Broad-chested and bearded, he sat by himself in the back row of the auditorium, wearing a camouflage trucker hat, a brown polo shirt, and cargo pants. "John commands respect," I was told by David Peterson, the president of the Language Creation Society and the inventor of Dothraki, the language spoken by a race of pseudo-Mongol nomadic warriors in the HBO series "Game of Thrones." (Dothraki is now heard by more people each week than Yiddish, Navajo, Inuit, Basque, and Welsh combined.) In 2008, Peterson awarded Ithkuil the Smiley Award for the best invented language of the year. "Few have or, I'm sure, ever will, produce anything as complete and compelling as Ithkuil," he proclaimed in the award presentation.

Quijada appreciated the award, but he generally keeps a low profile in the conlanging world. On the Facebook page devoted to Ithkuil, where fans post translations of the Lord's Prayer, and offer "Ithkuil Wisdom of the Day," Quijada lurks but never comments.

When I met him, Quijada was preparing to deliver a talk on the topic of phonoaesthetics, that hard-to-pin-down quality which gives a language its personality and makes even the most argumentative Italian sound operatic, the most romantic German sound angry, and Yankee English sound like a honking horn. He asked rhetorical questions of the audience, such as "Should my language include diphthongs?" while offering advice like "If you put front vowels in your language, nobody will take it seriously as a language of Orcs." His speaking style was confident and professorial in a way that might have seemed arrogant were it not for his frequent self-deprecation.

At the previous year's conference, where Quijada had lectured on Lakoff's theory of metaphor, he had begun his presentation by speaking sentences in six languages created by conference attendees. For most of them, it was the first time they had heard their language spoken by another human being.

Unlike earlier philosophers and idealists, who believed that their languages could perfect humanity, modern conlangers tend to create their languages primarily as a hobby and a form of self-expression. Jim Henry, a retired software developer from

Stockbridge, Georgia, keeps a diary and prays in his constructed language, gjâ-zym-byn. If there is a god paying attention, he is the language's only other speaker.

Many conlanging projects begin with a simple premise that violates the inherited conventions of linguistics in some new way. Aeo uses only vowels. Kēlen has no verbs. Toki Pona, a language inspired by Taoist ideals, was designed to test how simple a language could be. It has just a hundred and twenty-three words and fourteen basic sound units. Brithenig is an answer to the question of what English might have sounded like as a Romance language, if vulgar Latin had taken root on the British Isles. Láadan, a feminist language developed in the early nineteen-eighties, includes words like *radíidin*, defined as a "non-holiday, a time allegedly a holiday but actually so much a burden because of work and preparations that it is a dreaded occasion; especially when there are too many guests and none of them help."

Invented languages have often been created in tandem with entire invented universes, and most conlangers come to their craft by way of fantasy and science fiction. J. R. R. Tolkien, who called conlanging his "secret vice," maintained that he created the "Lord of the Rings" trilogy for the primary purpose of giving his invented languages, Quenya, Sindarin, and Khuzdul, a universe in which they could be spoken. And arguably the most commercially successful invented language of all time is Klingon, which has its own translation of "Hamlet" and a dictionary that has sold more than three hundred thousand copies.

"Thanks, kid, but I don't need a trusty sidekick."

The discipline of linguistics has a history of giving uncredentialled amateurs a seat at the table. Indeed, one of the foundational linguistic theories of the twentieth century, which came to be called the Sapir-Whorf hypothesis, was based in part on the work of Benjamin Whorf, an inspector for the Hartford Fire Insurance company. Whorf never got an advanced degree, but he took graduate classes in his free time with the anthropologist and linguist Edward Sapir, in the nineteen-thirties, and he devoted his leisure hours to the study of Native American languages.

Neither Sapir nor Whorf formulated a definitive version of the hypothesis that bears their names, but in general the theory argues that the language we speak actually shapes our experience of reality. Speakers of different languages think differently. Stronger versions of the hypothesis go even further than this, to suggest that

language constrains the set of possible thoughts that we can have. In 1955, a sociologist and science-fiction writer named James Cooke Brown decided he would test the Sapir-Whorf hypothesis by creating a "culturally neutral" "model language" that might recondition its speakers' brains.

Brown based the grammar for his ten-thousand-word language, called Loglan, on the rules of formal predicate logic used by analytical philosophers. He hoped that, by training research subjects to speak Loglan, he might turn them into more logical thinkers. If we could change how we think by changing how we speak, then the radical possibility existed of creating a new human condition.

Brown never succeeded in creating more logical thinkers, and today the stronger versions of the Sapir-Whorf hypothesis have "sunk into . . . disrepute among respectable linguists," as Guy Deutscher writes, in "Through the Looking Glass: Why the World Looks Different in Other Languages." But, as Deutscher points out, there is evidence to support the less radical assertion that the particular language we speak influences how we perceive the world. For example, speakers of gendered languages, like Spanish, in which all nouns are either masculine or feminine, actually seem to think about objects differently depending on whether the language treats them as masculine or feminine; those conceptual differences are maintained even when they learn a second, non-gendered language, like English.

Quijada would endorse a weak version of the Sapir-Whorf hypothesis, and the conlanging community includes some of the last true believers in a strong version. After all, if our thoughts are necessarily imprisoned by language, as Sapir-Whorf suggests, then the only sensible course of action is to build a roomier, more lavish jail cell with all the amenities an inmate could possibly desire—a new language that could make possible new ways of thinking.

If you imagine all the possible notions, ideas, beliefs, and statements that a human mind could ever express, Ithkuil provides a precise set of coördinates for pinpointing any of those thoughts. The final version of Ithkuil, which Quijada published in 2011, has twenty-two grammatical categories for verbs, compared with the six—tense, aspect, person, number, mood, and voice—that exist in English. Eighteen hundred distinct suffixes further refine a speaker's intent. Through a process of laborious conjugation that would befuddle even the most competent

Latin grammarian, Ithkuil requires a speaker to home in on the exact idea he means to express, and attempts to remove any possibility for vagueness.

In the original version of Ithkuil, the word *Ithkuil* literally means "hypothetical representation of a language," which reflects the fact that it was never meant to be casually spoken. It was an attempt to demonstrate what language could be, not what it should be. "The idea of Ithkuil is to convey deeper levels of human cognition than are usually conveyed in human language," Quijada told me. For example, the phrase "characteristic of a single component among the synergistic amalgamation of things" is a single adjective: *oicaštik'*.

If that word looks as though it required extreme acts of tonsillar gymnastics to produce, it is because no sound or syllable is wasted in Ithkuil. Every language has its own phonemic inventory, or library of sounds, from which a speaker can string together words. Consonant-poor Hawaiian has just thirteen phonemes. English has around forty-two, depending on dialect. In order to pack as much meaning as possible into each word, Ithkuil has fifty-eight phonemes. The original version of the language included a repertoire of grunts, wheezes, and hacks that are borrowed from some of the world's most obscure tongues. One particular hard-to-make clicklike sound, a voiceless uvular ejective affricate, has been found in only a few other languages, including the Caucasian language Ubykh, whose last native speaker died in 1992.

On a warm afternoon in mid-July, I visited Quijada's modest three-bedroom home in suburban Sacramento, where he lives with his wife, Carol Barry, also a retired civil servant. One set of bookshelves was lined with dictionaries of Yoruba, Latvian, Basque, Hausa, and more than three dozen other languages. Another was packed two layers deep with science-fiction paperbacks.

Quijada turned on some Congolese soukous music, one of many genres of world music of which he considers himself an aficionado, and pulled out a copy of an unpublished science-fiction novel he co-wrote with his identical twin, Paul, called "Beyond Antimony," about the philosophical implications of quantum theory. (Quijada and his twin communicated with each other in a private language when they were young, a phenomenon that is surprisingly common, and has its own name:

cryptophasia.) In the novel, Ithkuil is used as a "para-linguistic interface for an array of quantum computers that are being used to create emergent consciousness."

He opened a closet and pulled out a plastic tub filled with reams of graph paper documenting early versions of the Ithkuil script and twenty-year-old sentence conjugations handwritten in marker on a mishmash of folded notepads. "I worked on this in fits and starts," he said, looking at the mass of documents. "It was very much dependent on whether I was dating anyone at the time. This isn't exactly something you discuss on a first or second date."

Human interactions are governed by a set of implicit codes that can sometimes seem frustratingly opaque, and whose misreading can quickly put you on the outside looking in. Irony, metaphor, ambiguity: these are the ingenious instruments that allow us to mean more than we say. But in Ithkuil ambiguity is quashed in the interest of making all that is implicit explicit. An ironic statement is tagged with the verbal affix 'kçç. Hyperbolic statements are inflected by the letter 'm.

"I wanted to use Ithkuil to show how you would discuss philosophy and emotional states transparently," Quijada said. To attempt to translate a thought into Ithkuil requires investigating a spectrum of subtle variations in meaning that are not recorded in any natural language. You cannot express a thought without first considering all the neighboring thoughts that it is not. Though words in Ithkuil may sound like a hacking cough, they have an inherent and unavoidable depth. "It's the ideal language for political and philosophical debate—any forum where people hide their intent or obfuscate behind language," Quijada continued. "Ithkuil makes you say what you mean and mean what you say."

In Ithkuil, the difference between glimpsing, glancing, and gawking is the mere flick of a vowel. Each of these distinctions is expressed simply as a conjugation of the root word for vision. Hunched over the dining-room table, Quijada showed me how he would translate "gawk" into Ithkuil. First, though, since words in Ithkuil are assembled from individual atoms of meaning, he had to engage in some introspection about what exactly he meant to say.

For fifteen minutes, he flipped backward and forward through his thick spiral-bound manuscript, scratching his head, pondering each of the word's aspects, as he packed

the verb with all of gawking's many connotations. As he assembled the evolving word from its constituent meanings, he scribbled its pieces on a notepad. He added the "second degree of the affix for expectation of outcome" to suggest an element of surprise that is more than mere unpreparedness but less than outright shock, and the "third degree of the affix for contextual appropriateness" to suggest an element of impropriety that is less than scandalous but more than simply eyebrow-raising. As he rapped his pen against the notepad, he paged through his manuscript in search of the third pattern of the first stem of the root for "shock" to suggest a "non-volitional physiological response," and then, after several moments of contemplation, he decided that gawking required the use of the "resultative format" to suggest "an event which occurs in conjunction with the conflated sense but is also caused by it." He eventually emerged with a tiny word that hardly rolled off the tongue: *apq'uxasiu*. He spoke the first clacking syllable aloud a couple of times before deciding that he had the pronunciation right, and then wrote it down in the script he had invented for printed Ithkuil:

"Now imagine a culture where gawking is not only culturally appropriate but laudatory. Ithkuil would have a word for that, too," Quijada explained. Having grammatically systematized all the many aspects that turn seeing into gawking, he showed me how he could apply those same grammatical transformations to any verb, so that one could open a door or run to the store or throw a ball with all of the same nuanced inflections of impropriety, surprise, and shock that transform a mere look into a gawk.

"You can make up words by the millions to describe concepts that have never existed in any language before," he said.

I asked him if he could come up with an entirely new concept on the spot, one for which there was no word in any existing language. He thought about it for a moment.

"Well, no language, as far as I know, has a single word for that chin-stroking moment you get, often accompanied by a frown on your face, when someone expresses an idea that you've never thought of and you have a moment of suddenly

seeing possibilities you never saw before." He paused, as if leafing through a mental dictionary. "In Ithkuil, it's *ašţal*."

In 2010, Quijada found himself in a position he'd long sought to avoid. In order to get time off to attend the conference in Kalmykia, he was forced to disclose to his boss and co-workers, some of whom had known him for more than two decades, that he had been concealing a hobby that had consumed his nights, weekends, and lunch breaks ever since college.

"People at work now held me in some sort of state of half awe, because this guy obviously has more going on in his head than being a manager at this dopey state agency, and half in contempt, because I've now proved myself to be beyond whatever state of geekery they might have previously thought about me," Quijada said. " 'You're a what? A con man?' 'No, boss, a conlanger.' " He was being sent halfway around the world on an all-expenses-paid trip, sponsored by a foreign government, to take part in a conference whose docket of speakers included philosophers, sociologists, economists, biologists, a logician, and a Buddhist monk. Not only had Quijada never been to Kalmykia; he'd never heard of it before.

To the extent that it's known at all, Kalmykia is notable for two things: for being the only majority-Buddhist state west of the Ural Mountains, and for having an eccentric former President, Kirsan Ilyumzhinov, an oligarch-turned-politician, spend millions of dollars of his own fortune turning a dusty, forgotten corner of the Russian steppe into the chess capital of the world. Ilyumzhinov claims to have been abducted from his Moscow apartment, in 1997, by extraterrestrials, who gave him a tour of the galaxy and taught him that chess came from outer space.

Upon landing in Elista, Quijada was greeted by an interpreter and whisked off to Chess City, a community of middle-class California-style town houses built on the outskirts of town to host the 1998 World Chess Championships. There he met a student, a young woman, who informed him that a group of students at the University of Effective Development, in Kiev, had been studying Ithkuil intensively for the past two years, and saw it as an integral part of a psychonetics training program that they were developing. Another student told him that he and his friends regarded him as "a legend." Quijada still had no real idea what psychonetics

was, or why the University of Effective Development might be interested in it. He was speechless.

"You tend to think by age fifty-one that you've pretty much seen everything life can throw at you," he wrote later. "But from that moment on, John Q. was through the looking glass."

Quijada opened his presentation the next morning by showing an image of Marcel Duchamp's "Nude Descending a Staircase, No. 2," a seminal work of Cubist painting, which captures a figure in motion with abstract lines and planes. It's not an easy work to describe in any language, but Quijada wanted to demonstrate how one would attempt the task in Ithkuil.

He began with several of the language's root words: -QV- for person, -GV- for clothing, -TN- for an implement that counters gravity, and -GW- for ambulation, and showed how to transform those roots through each of the language's twenty-two grammatical categories to arrive at the six-word sentence "*Aukkras êqutta ogvëuļa tnou'elkwa pal-lši augwaikštülnàmbu*," which translates roughly to "An imaginary representation of a nude woman in the midst of descending a staircase in a step-by-step series of tightly integrated ambulatory bodily movements which combine into a three-dimensional wake behind her, forming a timeless, emergent whole to be considered intellectually, emotionally, and aesthetically."

That evening, following a series of interviews with the Kalmykian press, there was a get-together of conferees in the town house in Chess City where Oleg Bakhtiyarov, the professor responsible for Quijada's invitation to Kalmykia, was staying. The psychoneticists talked into the night about their experiments in "deconcentration of attention" and other techniques of spiritual self-development. But the more Quijada pressed them for an explanation of their philosophy the more elusive it seemed. Above all, he couldn't quite figure out why they were so obsessed with his language.

"I never did get a handle on what these techniques really were," Quijada recalled. He chalked up his misunderstandings to poor translation, and decided that it would be impolite to voice too much skepticism. As the evening unfolded, he found himself perched barefoot and cross-legged on a sofa, with a group of young Russian students gathered on the rug at his feet.

"I was surrounded by all these people hanging on my every word. It was intoxicating—especially for a loner like me," Quijada said. "For one day, I got to play as an academic. I got to live this fantasy where I took the other path in the garden. I got to see what it would have been like if I had gone to graduate school and become a professional linguist. The fates of the universe tore open a window to show me what my life could have been. That night, I went back to my room, took a shower, and burst into tears."

In May, 2011, I accompanied Quijada on a return trip to the former Soviet Union, this time to attend "SingEngineering: Ithkuil & Psychonetica," a two-day conference in Kiev that had been organized by the University of Effective Development. The befuddling title of the conference seemed to be a mistranslation of the Russian *znakotehnologiya*, which makes only marginally better sense when rendered as "Sign Engineering."

We were picked up at the airport by Alla Vishneva, an attractive brunette with streaks of bleached blond in her hair, with whom Quijada had been exchanging e-mails and phone calls intermittently for the past several months. Vishneva, a former professor of Ukrainian at Rivne State Humanitarian University and a student of psychonetics, was the founder of an Ithkuil study group in Kiev.

Quijada, who had been wearing a pair of Coke-bottle glasses and toting a cane to compensate for a leg injury, sized up her metallic silver boots and figure-hugging bluejeans and seemed taken aback. "What is a beautiful woman like you doing teaching Ithkuil?" he asked.

Vishneva chuckled and returned the compliment in stilted English: "Ithkuil is beautiful. It's a very pure and logically constructed language."

Quijada turned to me in the back seat of the car, visibly giddy. "It's one thing for another conlanger to call your work beautiful, but for someone halfway around the world with a million better things to do to say that—you've got to pinch yourself. It makes it seem like thirty years of slaving away might have been worth it."

"We think that when a person learns Ithkuil his brain works faster," Vishneva told him, in Russian. She spoke through a translator, as neither she nor Quijada was yet

fluent in their shared language. "With Ithkuil, you always have to be reflecting on yourself. Using Ithkuil, we can see things that exist but don't have names, in the same way that Mendeleyev's periodic table showed gaps where we knew elements should be that had yet to be discovered."

"She really understands my language!" Quijada exclaimed. He leaned across the headrest and told Vishneva, who was sitting in the front passenger seat, "I don't know if you're a saint or crazy."

The conference was held in a Soviet-era high-school classroom, the walls of which were covered in chalkboards and forest-green Naugahyde. Most of the attendees were either students or faculty of the University of Effective Development, but none of them, Quijada noted, looked like the typical language geeks he knew from the conlanging community. For one thing, they were more physically imposing; many of the men had shaved heads.

Bakhtiyarov, who had just flown in from a conference in Egypt, delivered the opening remarks. Wiry, with short gray hair and a dark mustache, he carried himself with a studied calmness that came across at times as diffidence. He explained to me later that he had begun his career as a medical student at the Kiev Medical Institute, but was expelled for distributing "provocative literature" on campus. In the late sixties, the K.G.B. labelled him "politically unreliable," and sent him to prison for two years. When he got out, he switched to biology, and eventually became a psychologist. In the nineteen-eighties, despite his history of radicalism, he ended up working for the Soviet government on a project to develop a set of stress-management techniques for cosmonauts, soldiers, and other individuals in states of psychological extremis. Those techniques form the basis of psychonetics, a quasi-mystical, quasi-philosophical self-help movement whose goal is to develop "technologies of human consciousness."

After I asked several times for a demonstration of these technologies, Bakhtiyarov pulled up a piece of software on his laptop. Half a dozen colored circles were slowly bouncing around the screen like billiard balls, shooting off in new directions as they collided with each other. Bakhtiyarov instructed us to try to look at the screen as a unified gestalt, instead of focussing on any individual ball. "Your attention creates subjects and objects as it filters a stream of data," he said. "With deconcentration, we

have no objects, just a feeling of everything in a single integrated whole." After a few moments, the balls all went black, and we were supposed to keep track of their original colors as they continued to bounce around the screen. It was, of course, impossible. But, according to Bakhtiyarov, it is through exercises like this that a psychoneticist can begin to access deeper layers of intuition about the world.

Psychoneticists may be the world's strongest believers in the Sapir-Whorf hypothesis. For them, language is a barrier that gets in the way of a holistic perception of the universe. "A psychoneticist must have nothing unconscious. Everything must be conscious," Bakhtiyarov explained. "This is the same goal as Ithkuil. Human beings have a linguistic essence, but we are in a transitional stage to some other essence. We can defeat and conquer language." He sees Ithkuil as a tool to bring all of one's unconscious thoughts and feelings under conscious control.

In addition to the University of Effective Development in Kiev, there are psychonetics laboratories in Kharkov, Odessa, Zaprozia, Minsk, Elista, St. Petersburg, Alma-Ata, Krasnoyarsk, and Moscow, where practitioners try to find ways to access "deep layers of consciousness" to become "more effective in business, increase willpower, creative skills, problem solving, and leadership." At the conference, Bakhtiyarov announced that, beginning the following semester, Ithkuil would be made a mandatory part of the school's curriculum in Kiev and at satellite campuses in three other cities.

One of the conferees, a graduate of the University of Effective Development named Gennadiy Overchenko, explained that he had used psychonetics to develop skills in a variety of disciplines where he previously had no expertise, from chess to cooking to gouache painting. He later told me that, after half an hour of meditation, he was able to sight-read Beethoven's "Moonlight Sonata" despite being a novice pianist. "In the past two years, I have never fallen (including on ice), and have not dropped or broken anything," he continued.

Another conferee, Marina Balioura, described how, while under the influence of psychonetic techniques, she could simultaneously write two different sentences with each of her hands. A young lawyer named Ilya Petichenko recounted an exercise that uses Ithkuil to "go into the field of pure meanings." His wife, Victorya, explained how psychonetics helped her "just bounce off the floor with creativity."

I glanced over at Quijada, who seemed to be amazed at how well the presenters grasped the fundamentals of his language, and yet increasingly flustered by their weirdness. The group had gathered to discuss linguistic transparency, and yet the more the psychoneticists described their interest in Quijada's language the more opaque it all seemed.

A gaunt man with closely cropped hair sat on one side of the room and recorded the proceedings on a camcorder. He slouched in his chair, showing only intermittent interest in the proceedings, until he came to the front of the room to address the conference. He introduced himself as Igor Garkavenko. Rather than hand his camcorder off to someone in the audience, he continued to hold on to it while he spoke, pointing it at me and our translator.

"You got better–looking as you got older–up to a point."

As he spoke, the translator whispered in my ear; Garkavenko spoke so fast and monotonously that it was difficult to keep up. He mentioned a recent stint in prison, described reading Bakhtiyarov's book, "Active Consciousness," in his jail cell every day, and the transformational effect that psychonetics had had on his political and philosophical consciousness.

Near the end of his speech, the translator stopped speaking. The color had fled his cheeks. "Do you realize who this guy is?" he whispered to me. "This guy is, like, the No. 2 terrorist in Ukraine."

A quick Google from our seats pulled up a news report with a photograph of the man who was standing at the podium. Garkavenko, it turned out, was the founder of a militant far-right Russian nationalist organization called the Ukrainian People's Revolutionary Army. In 1997, he was sent to prison for nine years for firebombing the offices of several Ukrainian political and cultural organizations, as well as the Israeli cultural center in Kharkov.

I turned to my translator. "What in the world is this guy doing at a linguistics conference?"

I leaned over to Quijada and told him what I had just read. We looked around the room at the collection of young men and women in attendance, and were suddenly

struck by a question that probably ought to have dawned on us earlier: What were any of these people doing here?

After the conference wrapped up, Quijada and I met over a cup of coffee to debrief, and to try to figure out what we had just taken part in. We ran Internet searches on Bakhtiyarov and Garkavenko, and, with the help of Google Translate, we decoded some of their writings in Russian, including a trail of Garkavenko's anti-Semitic blog posts. "A considerable proportion of the populace knows the role of the State of Israel, and the élites related to it, in those disastrous processes that the peoples of the former Soviet Union are now living in," one of his essays proclaimed. I read that one aloud to Quijada, who twiddled anxiously with the strap of his luggage, a look of devastation on his face.

We discovered that Bakhtiyarov, in addition to his work on psychonetics, moonlights in politics. In 1994, he joined the leadership of the Party of Slavonic Unity, a short-lived ultra-nationalist movement whose goal was the reunification of Russia, Ukraine, and Belarus into a Slavic confederation that would also include Poles, Czechs, Serbs, Slovaks, and Bulgarians.

In interviews, Bakhtiyarov talks of developing "intellectual special forces" that can bring about the "reëstablishment of a great power" in greater Russia, and give birth to a "new race . . . that can really be called superhuman."

An intellectual élite capable of seeing through the tissue of lies to the underlying essence of things needs a language capable of expressing their new way of thinking. Like Heinlein's fictional secret society of geniuses, who train themselves in Speedtalk in order to think faster and more clearly, Bakhtiyarov and the psychoneticists believe that an Ithkuil training regimen has the potential to reshape human consciousness and help them "solve problems faster." Though he denies that psychonetics is a political project, it's hard to uncouple Bakhtiyarov's dream of creating a Slavic superstate from his dream of creating a Slavic superman—perhaps one who speaks a disciplined, transparent language such as Ithkuil.

"When I get home, the first thing I'm doing is draft a letter to Dr. Bakhtiyarov saying I don't want to have anything else to do with psychonetics," a dispirited Quijada told me. "What if, God forbid, this were labelled as pseudoscience, or some

sort of cult? I wouldn't want to be complicit in that. To find out that, when all is said and done, I'm ultimately a pawn for these misguided Nietzschean whatever-they-are . . . it just turns me off."

Quijada and I weren't the only ones who had been using Google. Garkavenko blogged his account of the conference on Live Journal and posted the video he shot of me on YouTube.

"At the conference, there was one person . . . with an interpreter," he wrote on his blog. "To put it simply: he had Pentagon written all over him. I don't know, it was plain and simple, a stereotypical caricature of the face of a government agent. . . . When he took the initiative and asked a question, it was always exactly the thing that a government agent would bluntly ask about."

Garkavenko had also noticed the moment when my translator and I realized who he was. "He changed right before our eyes. . . . It became clear that he had met me on the Internet. Afterward, I found out whom fate had brought. Joshua Foer . . . the well-known journalist . . . a descendant of Odessa Jews who had once fled to the West, at an inopportune time for them. Of course, they were confident in their intuitions. And how could they over there ignore a phenomenon like Oleg Bakhtiyarov's project?"

Releasing a newborn language into the wild, where it can evolve and be corrupted in the mouths of others, has consistently proved difficult for language creators. More than once, it has been accompanied by the same sense of destructive disappointment that the Biblical God experienced after he released his own perfect creations into the world and discovered that they weren't so perfect after all. Charles Bliss, a survivor of Buchenwald and the inventor of the pictographic language Blissymbolics, became unhinged when he learned that teachers were modifying his language to make it a tool for children with cerebral palsy to learn English. Volapük, a language created in the nineteenth century by a German Catholic priest named Johann Martin Schleyer, once had two hundred and eighty clubs around the world and more speakers than Esperanto. But its audience collapsed when Schleyer refused to allow anyone other than himself to coin new words.

Toward the end of the Kiev conference, one of the professors from the University of Effective Development told Quijada that she couldn't understand why he had no interest in building a movement of Ithkuil speakers and students. "Your language is taking on a life of its own," she told him. "You should become a part of it."

"It's not my passion," Quijada told her politely. "It was a twenty-five-year itch that I needed to scratch. I scratched it. If others can pick it up and run with it, that's wonderful, but I've accomplished what I wanted to accomplish. You've shown me that you understand my work far better than I would have thought other persons could understand it. Indeed, perhaps you understand its potential better than I do."

A few months after returning from Kiev, Quijada finally had the opportunity to meet George Lakoff, at his home in Berkeley. Lakoff was laid out on his sofa after a back operation that kept him from going in to work. At my urging, he had agreed to see Quijada.

As we walked up the front-yard path to the house, Quijada was as adrenalized as I'd ever seen him. "This is one more step in the adventure, I guess," he said.

Lakoff's wife opened the door and escorted us to the living room.

"Why me?" Lakoff asked Quijada, from his spot on the couch.

"Because you're my hero," he said.

Lakoff, who is seventy-one, bearded, and, like Quijada, broadly built, seemed to have read a fair portion of the Ithkuil manuscript and familiarized himself with the language's nuances.

"There are a whole lot of questions I have about this," he told Quijada, and then explained how he felt Quijada had misread his work on metaphor. "Metaphors don't just show up in language," he said. "The metaphor isn't in the word, it's in the idea," and it can't be wished away with grammar.

"For me, as a linguist looking at this, I have to say, 'O.K., this isn't going to be used.' It has an assumption of efficiency that really isn't efficient, given how the brain

works. It misses the metaphor stuff. But the parts that are successful are really nontrivial. This may be an impossible language," he said. "But if you think of it as a conceptual-art project I think it's fascinating."

In the months that I'd known him, Quijada had compared himself to a painter several times, and spoken often of the impulse to create, but this was the first time I'd heard him or anyone refer to Ithkuil simply as a work of art. And yet that description of his project seemed to sit better with Quijada than any other set of words that anyone else had used to describe it.

"If linguistics is the best window into the mind that we have, why wouldn't you want to manipulate it for artistic purposes?" he said to Lakoff.

"The beauty of this for me is that you went through the world's languages and collected all these features, as if to say, Look at what human language is capable of. I say, bless you!" Lakoff told him. The meeting lasted almost five hours.

When Quijada returned home, he made a final set of tweaks to the Ithkuil grammar, and declared his thirty-four-year project complete. Then he self-published a definitive, four-hundred-and-thirty-nine-page description of the language. Though he dedicated the book to Alla Vishneva, he politely declined Bakhtiyarov's invitation to speak at another conference, in Moscow.

Once the deflation of Kiev and the excitement of the meeting with Lakoff had worn off, I wrote to Quijada and asked if there might be a brief phrase in Ithkuil to summarize the journey that he and his language have taken during the past year. He sent me a sentence: "*Eipkalindhöll te uvölîlpa ípçatörza üxt rî'ekçuöbös abzeik^{h}ouxhtoù eqarpaň dhai'eickòbüm öt eužmackûnáň xhai'ékc'oxtîmmalt te q^{h}oec îtyatuit^{h}aň.*" "I am privileged to have had the rare experience of having what I think of as a hobby propel me to faraway places where one encounters new ideas along with new cultures and new peoples generous in their hospitality and respect, leading me to humble introspection and a new appreciation for the human spirit and the wonders of the world."

Of course, that's not quite right, either. ♦

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