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From the President

Now that War in the Middle East appears inevitable, it is time for Americans to reconcile their feelings with the needs of their nation. In a nutshell, it is time for all of us to pledge our allegiance to our flag and the nation for which it stands. True, the land of freedom and democracy affords us the flexibility to choose issues and stand for ideals. It allows us to voice our disapproval and our opinions with the old "in-your-face" attitude that has made us so unique throughout history. But it also bestows upon us the ultimate trust to preserve and defend it to the very last man. Granted, this conflict may not come to that extreme. But our thought processing should.

When the decision is made by our President-and it will be irreversible-our reaction must focus on the support that will be needed to speak as one voice. The hundreds of thousands of men and women who have already deployed overseas need it, and our history demands it. Indeed, the learned body of our population has read many books, conceptualized countless scenarios, politicized volumes of issues, and over-analyzed patriotism. But the bottom line is that our choice was made a long, long time ago. From the first bloodshed in 1770, through the summer of 1776, our destiny was carved in stone as one nation whose indivisibility has been recited and pledged by every child from the very first day of school. That rise to rebellion was neither conceived, nor seen through its conclusion by thugs. They were men of gigantic stature and conviction who counted on each other to challenge insurmountable odds. I cannot imagine how Adams, Franklin and Washington would feel if they were to witness a nation divided in the face of the current events.

If our forward troops are committed, then we immediately become the rear, and whether theoretically or otherwise, we cannot be flanked by creating ideological holes in our own lines. That could be a very costly mistake. A weakness that no other country is allowed to incur in times such as these. Thus, if the war comes, then we must believe that it has been carefully thought through. We must believe that all the possibilities to avoid it have been exhausted. At that time, we will stand together against those who will stand together against us. This fragile oasis of freedom that we call our country, regardless of its flaws, can only be sustained by the combined strength of its people. The call may be coming soon. Let's get ready.

God Bless.

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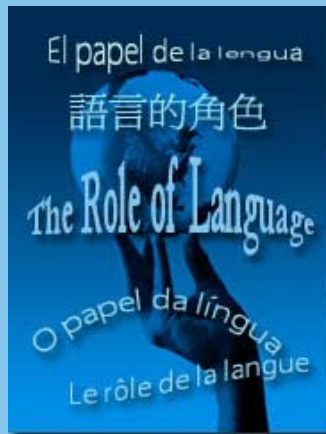
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The Role of Language in the Intelligence World



We humans are—for better or for worse—without any doubt at all the most intelligent species in our planet. Although I have my doubts about many of the people whom I have the enormous displeasure of meeting lately, that remains a true statement. Beyond the obvious, we are also the only species with language. In order to defend this theory (particularly the latter statement), let me preface by agreeing with most of you in that whales and dolphins—the two most adorable and recognizable in the animal kingdom by virtue of that magnificent invention called “television”—have, as well as do many other species, languages of their own. Likewise, lab chimps have effectively been taught rudimentary languages. And, for those who truly wish to take this argument to the limits of our limited imagination, true, body language is a form of language, and music is the international

language, and politics is a sort of language, and the complex world of odor and olfaction is another, highly emotionally charged language, and so on. (Daniel C. Dennett, 2001) There, are we all happy now?

But, beyond the basic understanding and recognition of this superb form of communication amongst we humans, there lies the danger inherent in the use of this tool within the world of intelligence. No, not the type of intelligence that allows you to fire neurons through your system so that your brain can tell your hand to pick up a cup of coffee and bring it to your mouth cavity so that you can order the subsequent organs to process the intake. The type that is used in today's world as a means to either “protect” or “affect.” Both varieties of thought are highly dependant on the use of language...and its variations. Although both can be analyzed and investigated by a systematic logical analysis of the necessary and sufficient conditions for the occurrence of various thoughts in various minds, and although in principle such an investigation might work, in practice it is hopeless and doomed. There is, in all honesty, no philosophical redeeming value to the world of intelligence and counter-intelligence. This is mostly an intuitive world, were your guts will guide your actions by virtue of animal instincts. Here again, we become ever so close to the non-reasoning, language-less, God-created creatures that roam the earth.

No room for idiot savants who can play an instrument with virtuosity but not read music in the intelligence world either. That is why there are no hyperfluent, apparently precocious conversations in the intelligence community, but rather few words with heavy meaning and often serious consequences. The world of intelligence and counter-intelligence is—as we have read in thousands of newspapers articles...and, as we all know, if it is in print it must be true... NOT!—an enigmatic underworld of spying, deception, and conniving maneuvering designed to outsmart the enemy, the likes of which none of us knows. I see, that equates to folklore stories about places where people enter and there are taken, tortured, butchered, and never returned to the outside world. I truly wonder where the stories come from then? I mean, if they are never returned... However, just like the media does for the sake of sensationalism, we assume and conceptualize something that truly do not know or could not even begin to understand. So, let us put this “007” spin aside and move on to the real issue.

Today, more than ever before in the history of our country's struggle against foreign as well as domestic enemies—just like 99 percent of other countries, for those of you who believe that the U.S. is in this alone—language plays the most significant role in solving the puzzle of gathering

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and disseminating information. Unless you have not been reading the papers (and who could possibly blame you for that?), translators, interpreters, and liaisons are being used today for menial as well as highly-sensitive tasks in our struggle against terrorism and the enemies of our country. And Arabic is not the only language in high demand, as our enemies begin to setup shop in other countries throughout the world. But, are we so profoundly retarded as to believe that our enemies are not doing precisely the same? And often using the same people? I would like to believe that we are not, because this is precisely the case. The bottom line is that foreign language support in the intelligence world is a double-edge sword, loaded with connotations other than grammar and syntax. And the atypical frenzy that was brought about by the events of September 11, 2001 (for those of you who have elected to forget about this atrocious enemy incursion into our precious territory) has only served to accentuate the dangerous aspect of recruiting, training, and utilizing linguists in support of our global operations, whatever those operations may be. But, are we as diligent and selective as we should be? As the private sector increasingly balances the “prize” against the “price” I should say that we are not. The demand has given way to speculation and piracy amongst linguists, elevated only to the highest degree possible by the private sector involved in supporting our efforts against terrorism. We are as ignorant as we are greedy. This greediness may ultimately cost a much higher price, and this tab will not be picked up by owners, operators, or Board members but rather by war fighters downrange. Wars are not fought in three-piece suits, folks.

Meanwhile, there is a linguistic twist to be taken into consideration. Although it would be virtually impossible for any of us to decipher the intelligence and counter-intelligence world—as it should be, mind you—it should be fairly easy for us to decipher the subtle, yet highly significant, variations and developments in the languages that are currently being used by our Government. Where in years past it was easy to find a Spanish translator or interpreter to communicate with Spanish speaking clients or audiences, now we need to find Argentinean Spanish speakers to communicate with Argentinean clients, and Chilean Spanish speakers to communicate with Chilean clients, as cultural nuances and sub-cultural, protective dialects have finally made an impact in communicating. Apply, if you would, the same principles to Southwest Asia where the culture is as complex as one could imagine and the outcome could be quite volatile. In essence, dialects and sub-dialects are being born every day as a means to stay ahead of the curve. As such, languages need to pivot on regions and even neighborhoods, rather than on countries. And, above all, the emphasis needs to be on culture and understanding. Philosophical analysis by itself cannot penetrate this thicket of perplexities. Political and cultural philosophers (or analysts, as they would prefer to be called) who pride themselves in defining their terms carefully might succeed in proving logically that mathematical thoughts are impossible without mathematical language. But it is precisely the opposite that applies to the intelligence community. Let me provoke your thought processing by suggesting that millions of dollars are being spent in foreign language programs developed by commercial enterprises whose sole purpose is to reap the benefits of a fiscal budget, instead of focusing on the cultural understanding of the “language du jour.” Better yet, we must ask ourselves who is minding the store while the bad element is busy encoding a language that has already been package and placed on the shelves by the private sector?

As times goes by, ignoring these details will increasingly misdirect us away from the issue at hand, and right into the web of those whose sole purpose is to capitalize on “the push for expeditiousness” that has plagued our country for years. Surprisingly, our Federal Government is well on its way to understanding and sorting out this problem, and for the first time in decades, the private sector is well behind and lost in the dilemma of how to profit from the defense budget. Time to wake up and lend a hand.

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Language linked to medical mistakes



Study at Boston clinic examines growing problem of errors made by interpreters

By MARILYNN MARCHIONE

Mistakes by interpreters - including a mother who was incorrectly told to put an oral antibiotic into her child's ears - are a significant cause of medical errors, a study by a Medical College of Wisconsin doctor suggests.

An average of 31 interpreter errors occurred on each of the 13 doctor visits in the study, which was published today in *Pediatrics*, the leading journal for illnesses affecting children.

Some of the mistakes were small, such as leaving out a word that didn't fundamentally change the meaning of what the doctor was saying.

But 63% were considered serious enough to have medical consequences, because the incorrect translation altered the description of illness to the doctor, misstated diagnostic or treatment options, or affected a parent's understanding of a child's condition or the need for follow-up visits or referrals.

Examples included translators omitting questions about allergies, not giving instructions on the dose or frequency of drugs or rehydration fluids, and giving mistaken directions, including the interpreter who instructed a mother to put the oral antibiotic amoxicillin into her child's ears to treat an ear infection.

The study involved only Spanish-speakers, but doctors say less common languages may be even more of a problem.

"We're finding these adverse outcomes in a very large language group. Imagine what it's like if you're Hmong, Laotian or Bosnian," said Glenn Flores, the doctor who led the study.

Flores recently became associate director of the Center for the Advancement of Urban Children, a joint program of Children's Hospital of Wisconsin and the Medical College. The study was done at a clinic in Boston, where he formerly worked. It also involved the Boston University School of Medicine, and was partly funded by a Robert Wood Johnson Foundation grant.

A growing problem

The study is relatively small in number of people - 13 patients - but involved nearly 50,000 words from tape-recorded interviews. One of the most comprehensive studies on this topic, the research documents a problem that medical experts agree is large, common and growing as the nation's ethnic groups expand.

About 45 million Americans speak a language other than English at home, and about 19 million speak little or no English, according to the most recent census. About 5% of school-age children

are limited in English proficiency, up 85% since 1979, Flores said.

Fewer than one-fourth of American hospitals employ professional interpreters, and even at those that do, the interpreters aren't always trained in medical terminology. Clinics and doctors' offices may have even less access to qualified interpreters.

When a professional translator isn't available, health care staffs often rely on nurses, social workers, friends or family members of the patient. Even bystanders are used.

"Sometimes they're people pulled from waiting rooms; sometimes they're a custodian," Flores said.

Children acting as interpreters pose special problems because although they may know more English than their parents, they may not understand the medical terms, context or significance of the information that needs to be conveyed. Or, they might be embarrassed at having to use words to describe private body parts, and might even hide or not faithfully report all the information out of fear that pain or harm will come to a loved one.

A 14-year-old Hmong girl at a hospital in Minneapolis was trying to interpret for an older family member who needed medical procedures, said Sarah Sullivan, coordinator for interpreter services for Aurora Healthcare.

"They were telling her they wanted to do further X-rays. The girl told family members they wanted to microwave her. The family sued over that, for duress and emotional trauma," Sullivan said.

Mistakes by family members or amateur interpreters were more serious than those by hospital interpreters, the study found.

It involved 13 visits between pediatricians and Spanish-speaking mothers at a Boston clinic. Professional hospital interpreters were involved in six cases; family members, nurses or social workers did the job in the rest. Sessions were tape-recorded and then analyzed for interpreter mistakes.

Interpreters on staff

Many large hospitals in Milwaukee have interpreters on staff. Children's Hospital has two full-time and some part-time Spanish-speaking interpreters on staff. Froedtert Memorial Lutheran Hospital and the Zablocki Veterans Affairs Medical Center use outside services to provide interpreters as needed.

Aurora has a staff of one Vietnamese, one Croatian/Bosnian/Serbian and 11 Spanish interpreters who rotate among its hospitals and clinics, and "we work very closely with a group of interpreters" for Laotian and Hmong, who can be called in or scheduled as needed, Sullivan said.

She thinks awareness of the problem is improving. She teaches a class in medical interpreting at Waukesha County Technical College, the first of its kind in the state, and she noted that MATC is starting a bilingual medical terminology course this spring in Spanish and English.

An organization - the National Council for Interpreting in Health Care - recently formed and is trying to set standards for medical interpreters, Sullivan said. A member of its board, Shiva Bidar-Sielaff, heads interpreting services at University of Wisconsin-Madison.

All those things should help improve the situation Monica Lopez faced when she arrived in Milwaukee 17 years ago, speaking no English, with two sons with cerebral palsy.

"It was very hard," she said. When there's a language barrier, "you feel like you're not getting the complete situation with the doctors," she said.

Lopez has since become fluent in English and now works at Children's Hospital as a parent mentor, helping others whose children have special needs get medical care and social services.

Lost in Translation

A new study suggests that mistakes by interpreters are a significant cause of medical errors. The most common interpreter mistakes:

- Omitting a word or phrase, 52%.
- False fluency, or using a word or phrase that doesn't exist in that language, 16%.
- Substituting a different word or phrase than what the doctor used, 13%.
- Editorializing or giving a personal viewpoint about what the doctor said, 10%.
- Adding a word or phrase, 8%.

Source: Medical College of Wisconsin

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One Species: One Language

The Universal Nature of Human Languages



According to the book of *Genesis* , there was a time in human history when we all spoke one language.

And the whole earth was of one language, and of one speech. (Genesis 11:1)

Their one language allowed the people to work together without hindrances. They began to build the Tower of Babel.

And the Lord said, "Behold, the people is one and they have all one language; and this they begin to do: and now nothing will be restrained from them, which they have imagined to do. Go to, let us go down, and there confound their language, so they may not understand one another's speech." So the Lord scattered them abroad from thence upon the face of all the earth. (Genesis 11:6-8)

Today, the people of the world use more than 6,000 different languages and innumerable dialects. The unity is gone. We no longer understand each other.

However, many linguists believe that we actually do speak one language. While words are important, they're just the beginning. To linguists, real language is grammar, the structure that every language is built on.

For the last thirty-five years linguists have been on a quest to define the universal qualities that make up every natural language. The quest has attracted researchers from neurobiology, psychology, computer science, anthropology, and philosophy.

At stake is not only a better understanding of languages, but, by extension, an explanation of how our brains work.

The Structure of Universal Grammar: A Floor Plan

To understand what these researchers are looking for, it may be helpful to imagine all of the world's languages as a housing subdivision.

The houses all appear to be different. Builders used brick for one and wood for another. Over the years, owners have added porches and finished attics. But by looking past the brick and additions, you would see all of the houses started with the same floor plan.

For some linguists, that floor plan is called universal grammar--a term credited to MIT linguist Noam Chomsky who first championed the idea in the 1950s.

Linguists believe that universal grammar and its interaction with the rest of the brain is the design mechanism that allows children to become fluent in any language in the first few years of

their lives.

"It's a remarkable thing," NSF's Linguistics Program Director, Paul Chapin, says with a touch of understatement.

It is, in fact, one of the attributes that makes us human. Like our opposable thumbs and upright stance, linguists are proving this language ability is something all humans have.

Psychologist Steven Pinker has had NSF funding to study this concept which he writes about in his popular book, *The Language Instinct*. "Grammar is a protocol that has to interconnect the ear, the mouth and the mind, three very different kinds of machines. It cannot be tailored to any one of them, but must have an abstract logic of its own."

The idea of abstract logic is not obvious when looking at a child, admits Pinker of MIT, but, he continues: "Some of the organization of grammar would have to be there from the start, part of the language-learning mechanism that allows children to make sense out of the noises they hear from the parents."

Understanding this language-learning ability may help us develop better education techniques for children and rehabilitation techniques for brain-damaged individuals. The studies also may help computer programmers who are working on electronic translators. But most of all, the information will help us understand ourselves.



Steven Pinker, of MIT, tests the linguistic abilities of a young client. By studying children as they're learning language, researchers expect to identify the parts of language and grammar that are universal—that is, the parts that we're born with. Photo by J. D. Sloan

Studying An Invisible Structure

While Pinker and others say that logically there must be a universal grammar, finding proof of such a structure is a different matter. Much as physicists will never actually see gravity but still study the force's effects on other objects, linguists must use an indirect approach in their research.

These cognitive scientists look for places where the instinct of language still shows, places untouched by the more complicated language of the everyday world.

They compare languages, looking for universal rules. They study children learning languages. And they look at language mistakes, and language aberrations in society--people who cannot or do not interact in casual conversation.



Linguists compare languages, looking for universal rules. Others translate one language to another, allowing the various components of our species to understand each other and work together. United Nations/DPI Photo: M. Grant

A Glimpse of Pure Language

Susan Goldin-Meadow "watches" language. In an NSF-funded project, the psychologist from the University of Chicago studied ten deaf children in Chicago and Philadelphia. The children were born to hearing parents and, due to the parent's convictions of the importance of oral language, did not learn sign language.

If language ability were something learned instead of instinctive, these children would have communicated with their parents by simply pointing or making "non-symbolic" gestures. But after many hours of watching video taped sessions, Goldin-Meadow concludes that they used a more sophisticated system.

The children, ages 14 months to four years, developed internally consistent sign languages. They could string together signs to form structured sentences. They communicated past, present and future events. And they used their language to comment on their own and others' actions.

"This shows that the deaf kids bring something to communication," she says. Through this study and others like it, the basics of universal grammar are confirmed. There are sentences, words, and morphemes (the smallest unit of language, such as the prefix "un" in "undo"). There are nouns and verbs, and there are subjects and objects. These are not just social constructions but something deeper, more firmly placed in our brains.

But Goldin-Meadow also suggests that while we have an instinct, language is not something that blossoms in isolation. Each child in the two-city study is the sole fluent user of his or her language. Because of this, the languages themselves remain rudimentary.

For Goldin-Meadow, who is continuing her study with children in Taiwan, the issue is no longer whether or not the structure exists. The question is what does it look like.

Tracing the Mistakes

Linguist Victoria Fromkin investigates both universal grammar and individual grammars by analyzing our "slips of the tongue." Fromkin is a professor at the University of California, Los Angeles and co-author of the much-used college text, *An Introduction to Language*. Her current interest is the information revealed in spontaneous speech of normal speakers and of brain damaged aphasic speakers.

Among other mis-spoken phrases, Fromkin collects spoonerisms, e.g., when "Dear Old Queen" comes out "Queer old Dean." The NSF-funded study provides insights into how our brains store words.

"We all have a dictionary in our heads," she explains. "I'm trying to get at the way our mental dictionary is organized."

She suggests that we store words in several ways. While they may be listed alphabetically, as in normal dictionaries, they are also stored by their sounds. This explains why we may mistakenly refer to Christine as Karen because they both begin with the sound "k."

Spoonerisms occur when our brains mix similar sounding words such as "dear" and "dean."

Other slips of the tongue show that words are also stored by their meanings--similar to the way a thesaurus is organized. For example, Fromkin says, a person might substitute two words, saying "I've got to pay her rent" when he really means "I've got to pay her alimony."

These speech errors, however, do have distinct limits. "One would never find the substitution of words totally dissimilar in both their sounds and their meanings," she says.

In addition, we never exchange nouns and verbs, Fromkin says--this shows that the structure of the sentences is maintained and the syntactic part of speech category of words is present in our universal, mental dictionaries.

Finding Structural Joints

Fromkin also investigates deviant speech of a different population--brain-damaged patients with aphasia. By examining their speech errors and learning how their utterances differ from that of normal speech, she investigates what parts of the brain are involved in normal speech processing, and therefore what functions are universal.

"When one looks at the aphasic speech across languages, we again have evidence in support of universal grammar," she says.

For example, patients who have lesions in their left temporal lobes often produce ungrammatical speech, saying, in English, "the dog chase the cat" instead of "the dog chases the cat." In other languages, the aphasic speech mistake is the same.

By combining her careful documentation of what people actually say with new technology that monitors brain functions (such as Functional Magnetic Resonant Imaging), Fromkin says scientists may have a method that will allow them to understand the relationship between the brain and the cognitive systems, including universal grammar and language.



Modern people found ancient Egyptian hieroglyphs unintelligible until the 1799 discovery of the Rosetta Stone. The stone provided a Greek translation of the language. Source: Cleveland Museum of Art

Seeing the Floor Plan

As scientists sketch in the complex set of details that make up universal grammar, the level of human instinct emerges: We learn language because we must.

What's more, as we teach our children languages, it is useful to understand the starting point-

there is an innate understanding of grammar that surpasses all of the diagramed sentences in elementary school books.

And, as Steve Pinker writes, understanding this system strips away some of the division among humans. Similar to biologists' ability to identify the unity within a genus by examining genes, linguists look beneath the rhythms and pronunciations of words, to see the similarity among languages. "Knowing about the ubiquity of complex language across individuals and cultures and the single mental design underlying them all, no speech seems foreign to me, even when I cannot understand a word."

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