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CAN ADULTS BECOME GENUINELY BILINGUAL?

I. INTRODUCTORY PHILOSOPHICAL REMARKS

The variety of languages in the world is considered a curse by some, who view the phenomenon as a Tower of Babel. Others consider it the most characteristic quality of human language as opposed to animal languages, which are supposedly species specific. The variety is viewed as a symptom of human caprice, arbitrariness, or dependence on mere historical accident by some; and as a symptom of human freedom and of the creative aspect of language by others. And, of course, the human limitation caused by the variety of languages and the peculiarities of traditions within languages, as instanced by Sir Winston Churchill's The History of the English Speaking People, are again viewed by different thinkers from different philosophical viewpoints.

There is a lacuna here. Consider the fierce debate over the centuries of philosophy about the universality of human nature versus the specificity, not to say relativity, of the diverse cultures and civilizations within it. Consider the fact that again and again the most superficial as well as the most potent cultural barrier throughout history was the language barrier. (Admittedly, the limitation on travel is becoming an increasingly more important factor.) One would expect, then, more discussion on the linguistic part of the split of humanity to local cultures than there really is. Since Plato's days, the debate on nature versus convention was applied to language. Yet, until recent years, there is practically nothing on the topic and even recent works are surprisingly scanty.

No doubt, the lacuna is well noticed even though barely stated. This, I think, explains why there is so much interest in questions pertaining to it. The two prominent examples are, no doubt, two discussions, relating to two closely linked questions.

First, the question, is there an original language, an Ursprach, which is historically the ancestor of all existing human natural languages? Second, is there a blueprint of an archetype of language, or an ideal language, or the essence of language, implicit in all human natural languages?

That the two questions may easily be interconnected is all too obvious. Obvious is, also, the fact that we can connect them in different ways. For example, Platonist metaphysicians assume the antiquity of the best copies as immediate descendents from the originals. They will see the ideal language best manifest in the Ursprach. The Aristotelian who views essences as unfolding, will claim that the ideal language is best manifest in the best languages as exercised during the height of their fruitful application to literature, science and commerce.

The major difference is, really, more dependent on current views of language. To plunge immediately to modern linguistics, under the influence of the fathers of modern logic, the school of linguistics known as the transformational grammarians, to wit, Noam Chomsky, Morris Halle, and their associates, have taken grammar to be more characteristic of a language than its vocabulary. They have postulated both the existence of a universal language and its identity with the deepest of deep grammar. Chomsky himself is not decided on whether the deep structures, which the deep grammar should describe, are just the structures of a universal language.

One of the foremost characteristics of a given language is naively viewed as its idiom. Chomsky will have to reject this, of course. Yet, he can salvage a part of this idea by making transformations supremely important. Indeed, one way to deepen the structure of any given sentence is by seeing in it as many transformations as one need see there in order to explain all possible semantic ambiguities and relations: and this is why he and his followers try hard to hunt them.

Now since idiom is almost naturally described as that part of language which is not literally translatable to another language, there seems to be a paradox here, since idiom is explained both

as a part of a vocabulary, for example an accepted metaphor or even simile, and as a result of applying transformations to a somewhat deeper structure, for example telescoping and ellipsis. But the paradox can be explained: the deep structure of an idiom is universal; its accidental peculiar expression, like a technical word or a neologism, is specific. It has to be learnt.

Nevertheless, the difficulty that foreigners have regarding idiom, particularly regarding ordinary deletions, does come from their futile attempts at literal translation; hence, if they will be taught deep structural explanations of idioms, their difficulties should be quite considerably reduced (though not necessarily fully eliminated, of course).

This case then, of the foreigner's trouble with idiom, constitutes both a possible application of transformational grammar and a test of it. One who will try out this suggestion may benefit us all.

Foreigners have particular troubles both with idiom and with pronunciation. And just as they suffer from idioms because they attempt to exploit their mother tongue beyond the advisable limit, so they do, of course, with pronunciation. Ignoring the difference between French and English consonants, for example, speakers of French use French t's and d's and even r's in English speech, and speakers of English act likewise. The question is, can this be avoided?

Quite a priori, the initial guess, the null hypothesis, should be the same. If Chomsky and his friends are right, then adult foreigners can master native pronunciation to perfection if properly trained. The proper training should be, perhaps, based on a Chomsky-type theory of pronunciation, or perhaps a Roman Jakobsonian-type one. Something of the sort, I shall argue, may be attempted.

Members of Chomsky's group hold a different view. They follow tradition and accept the view that past puberty foreign accents cannot be easily adopted, and foreign tongues cannot be picked

up by themselves. In the present study I suggest that this is but an oversight.

The basis of this investigation is the observed fact that whereas children can pick up a new language with ease and with no foreign accent, adults cannot. I shall refer to this observed fact as to the observed blockage. Most if not all psycholinguists take it for granted that the observed blockage is due to a universal, unavoidable blockage. The blockage is then a fact of nature due to an inviolable law of nature. The present investigation suggests the contrary.

II. THE CAUSES OF THE BLOCKAGE

Is the blockage avoidable? We will be in a better position to answer this question after an examination of the question, what causes the blockage? For, if we know the cause we can form a reasonable idea about the possibility or impossibility of its removal. Let us examine two possible hypotheses that presume to explain the blockage. The first is biological; it suggests irremovability. The second is psychological; it suggests possible removability.

The first hypothesis assumes the existence of a morphological difference between child and adult, leading to a physiological difference, or the existence of a mere physiological difference. According to the first variant the change, during maturation, is due to congenital factors alone. It is otherwise according to the second variant, namely socialization or acculturation — particularly the setting of the jaw and the tongue's muscles to adjust to the mother tongue. There is a significant difference between the two variants: if jungle kids old enough to be blocked will turn out to be unblocked nonetheless, then the second variant will be preferred over the first. In the meantime the first variant seems to be the preferred one as it seems to have some empirical support from the study of brain damage in relation to the loss of verbal competence and the possibility of its retrieval.

There is no need, however, to go to any detail, since the hypothesis simply does not explain the blockage unless we assume explicitly that the change during maturation goes far enough to establish the block. And with this addendum the hypothesis becomes ad hoc enough so that we can accept all evidence supporting it yet deny it, i.e., deny the addendum. This will open the way to the second hypothesis that is much less ad hoc. It is empirically very well supported. I shall ignore its empirical support altogether in fairness to the first hypothesis.

The second hypothesis is this. When adults learn a new language they transfer knowledge of the first language, thereby gaining speed and losing the ability to emulate the natives to perfection. Children are also prone to do so, of course, but they are cruelly dissuaded by their peers who savagely laugh at their foreign accent, intonation, grammar, and idiom. Finally, adults develop in their sense of identity an attachment towards their own inadequate competence in the foreign language. This is so marked that on those occasions on which foreign speakers do improve their competence, they normally consider their own improved performance phony and so they reserve it to special occasions (to performances — ceremonial or theatrical — to cheating, and to joking, and so on).

The second hypothesis is psychological and so it permits the occurrence of exceptions to the observed fact. Whether these do actually happen is an open question. For my part I shall even go further and say that they have been observed, and even by expert linguists.

The reason for claiming this is the presence of a subtle change in the recent literature on bilingualism. At first, when the blockage was the center of interest, genuine bilingualism, as opposed to the bilingualism of blocked people, centered on accent, intonation, grammar, and idiom. It is no doubt that many immigrants are blocked yet are all round in better control over the acquired language than their mother-tongues: if one leaves the old country just in the early or middle grades of high

school and goes to high school and college in the new country, things can hardly be expected to be otherwise. Hence, the proficiency in the acquired language as far as vocabulary and sophisticated idiom and some parts of complex grammar (such as complex nesting and subjunctive conditionals) — all these qualities are irrelevant to the blockage. Indeed, whatever such an immigrant knows better in his second language is eo ipso irrelevant to the blockage, since it is unproblematic and the problem is the blockage. Nevertheless the newer studies of bilingualism come up with the hypothesis that almost no one is so bilingual as to be equally proficient in two languages in all noticeable aspects. (The accent is on 'all'.)

I explain this shift by the hypothesis that adults have been observed who are not blocked, i.e. whose bilingualism was developed in adult life, yet as if they were children. As this seems to contradict the basic observed fact, investigators stress the fact that obviously the control of the second language of these people was much inferior to their control of their first language. Indeed, we know that actors and singers are often required to learn at least parts of foreign languages by heart with accent free pronunciations; this looks like conflicting with our basic observation, but is too limited for that.

Let us ignore the questions, are there unblocked adults, and have some of them been observed? I am here concerned with blocked adults and unblocked children, not with the question of bilingualism so perfect as can be found in bilingual communities and hardly even there. That is to say, I am asking, can adults pick up a foreign language with ease, and with no foreign accent, intonation, grammar, or idiom?

Based on the second hypothesis, the question now reads: Can adults learn a second (or third, of course, or fourth) language without transfer?

III. CIRCUMVENTING THE BLOCKAGE

Suppose we could circumvent the blockage. What would this amount to? It would amount to teaching adults to speak

perfectly a foreign language of, say, five-year-old natives. That is to say, they will have (i) the perfect accent of natives, (ii) perfect intonation, (iii) perfect grammar not in the sense of the old fashioned grammarians but in the sense of transformational linguistics, though only of the more elementary and less sophisticated grammatical forms of the language, (iv) an elementary vocabulary, and (v) the elementary and fragmented or partial picture of the world that native speakers possess.

Will this be of any value? If the accepted views of language are true, and particularly if the nativist views now in fashion, are at all near the truth, then the road from the language of five year olds to the fully fledged one is a stone's throw, and so adult aliens who can speak like five year old natives will have little trouble picking up the rest of the language. They will, in particular, be able to transfer much of their knowledge of their own mother tongue to the development of their knowledge of their newly acquired languages.

This raises a new and fascinating problem: does such a transfer make a difference? I think it does. But it is a different kind of transfer. It is the kind of transfer one notices in the very change of the Hebrew language through the ages or in modern times when its prime model ceased to be German and became English, and later on American. I cannot discuss this fascinating point here.

There is another, much more technical question. Suppose adult foreigners acquire in an unblocked manner the tongue of five-year-old native speakers. Will they then develop a blockage? Especially if they then transfer as much as they can, will they develop a blockage? If they will, then our psychological hypothesis is false. For, the hypothesis explains the blockage as the outcome of an identification of a person with his existing blockage, not as the outcome of any need or want or any predilection or disposition. We assume, then, that the technical trouble will not arise. We assume that adults who have developed linguistic competence of five-year-old native speakers have circumvented the blockage for good.

The question, then, is, can we teach adult foreigners to speak like five-year-old natives? Can we prevent a transfer?

First, we have the standard instruments of transfer as used by traditional foreign language teachers all over the world — quite consciously and with a vengeance. These must be consciously prevented. They are things like writing old fashioned grammars with incantations of tenses and declensions and lists of exceptions, etc. etc. etc.; reciting of sophisticated poems and sacred texts; standard text-book exercises; comparisons and contrasts between the two languages — phonetically, grammatically, idiomatically; translations.

The best language laboratories are those that have already undertaken this first step to this or that degree of success. It is no accident that old-fashioned foreign language teachers oppose language-laboratory techniques. These techniques are not merely new helpful instruments. They bespeak different and opposing techniques.

One point of opposition may illustrate both the contrast between the two methods — the old fashioned and the language lab — as well as the limitations of the second. An experiment was performed by Sarah Rabinovitch of the Beer Sheva Hebrew Ulpan in Israel, which enables us to see all this with ease.

Subjects were asked to list the most immediate expressions in their own mother tongues — cuss-words, love words, expressions of surprise and of impatience, calls for the kids to come for a meal, and for the bus driver to wait a minute, etc.; each of them was also asked to tell a couple of emotionally loaded anecdotes. These then are read to a tape closely followed by their Hebrew translations. The tape is then played as a background noise while the subjects are busy in their simple daily chores. They pick up the Hebrew off the tapes and their acquisition of the language in general is highly facilitated as compared to that of a control group.

Now here transfer is consciously used, and in an area which traditional language teachers consciously and contemptuously

neglect. To an extent the blockage is circumvented. The language is in part picked up with ease. The explanation is obvious, The subject's sense of identity is made to work positively, not to block. Yet, on the whole, the result, highly successful as it is, is not good enough. In order to achieve a better result a higher degree of immediacy is required. Hence, perhaps this was no transfer at all. Transfer may all too easily stand in the way of intimacy.

The following information is well known and uncontested. To begin with, baby babbling is quite undifferentiated. Babies develop the intonations of their mother-tongues. They constrain themselves to the consonants and vowels of their mother-tongue. Babbling becomes at a high stage recognizable as specific to a mother tongue just before it breaks into imitative speech that soon becomes increasingly grammatical while the vocabulary is enriched and songs are learnt. This process lasts from the age of six to eighteen months to the age of about five years. (The time span is controverted since the detailed characterization of the process choice is.)

The process can easily be emulated. A tape can be made with characteristic sound patterns of native speakers of the given age group, each emulated by native adults. If we could consolidate each style of babbling in foreign adults before bringing them to the next, then, in my opinion, they should be able to graduate to the level of five-year-old natives within about six months of a program much less intense than that of the famous United States Army Language Program. And it seems to me possible to develop the program by trial and error with less than five years work by a small team, some expert some not, some local some foreign.

IV. AN OBJECTION

We have a biological hypothesis that prevents circumvention and a psychological one that permits it. It seems as if the very prevention makes the preventing hypothesis biological, on the ground that biology is an exact science that allows no exception, and vice versa. I do not wish to endorse this

impression. Indeed, I now offer a third hypothesis, which though psychological, prevents the removal of the blockage. And vice versa, perhaps, too. And a fourth one, which though biological, permits the circumvention of the blockage.

It is harder to offer a biological theory that permits the circumvention of the blockage; so I shall mention the fourth hypothesis and then move to the third. If the hypothesis about the setting of the speech organs in a groove is true it may still be possible to undo the damage. After all, they say that biologically one cannot become a dancer at late adolescence because of grooves, yet techniques can be developed to recover flexibility. This, however, is not good enough, since the effort of recovering flexibility demanded from adults differentiates the adult and the child. Unless we have a more detailed biological hypothesis, then, which is more informative, we will be unable to discuss this point much further. Yet though the fourth hypothesis is not good enough, I mention it so as to violate the idea that biology is less flexible than psychology.

Let me, then, offer the third hypothesis — a psychological hypothesis that puts an irremovable obstacle on the adult's acquisition of a new language. As children acquire language — any number of languages, actually — they learn both to talk and to think, they learn both form and content. Their linguistic experiences are those of mind-expansion. This experience is not in the least biologically confined to children. When university students learn vast vocabularies of technical terms, the experience may be dead to them but it might be, and hopefully it is, a live experience, a part of his entry into new fields of study that is full of adventure. In this case they will soon discover how much harder it is for them to learn the same terms in another language, even if the other language is their own mother tongue.

I submit that this experience is universal. We have all sorts of people learning in university technical terms that they then have to learn in another language. They may be bilingual and they may be learning in university in their first or in their second

language, acquired early or late. The result is the same. The excitement of the first encounter cannot be generated on the second encounter. The process is therefore harder the second time around.

The third hypothesis, then, is a generalization of this fact. Adults are blocked for want of the excitement that is involved in growing up and expansion.

A corollary to this hypothesis is that the block cannot be removed. It may, perhaps, be minimized, by involving the study of the native culture and customs and literature with the study of the language. Needless to say, a modern school of foreign language teaching has evolved about a century or so ago, that utilizes this very idea. Success was meager, but it may perhaps be somewhat improved.

For my part I think there is some truth in the third hypothesis, but not much. I think the second hypothesis is true, and that utilizing it will also help mitigate whatever is true in the third hypothesis. This mitigation will hopefully further heighten ability to pick up foreign languages with almost as much ease as infants.

V. PHILOSOPHICAL POSTSCRIPT

I have referred in the opening paragraphs of this essay to the philosophical literature on the universal versus the specific in humans. I wish now to return to this matter and discuss the relevance of the general philosophic point to our specific psycholinguistic one, but via another problem, namely that of the limit of human adjustability.

The point is this. The debate about human nature began with the Greek discovery of the distinction between nature and convention. The distinction hides two theories. (As usual, any distinction, being a stipulation or a partial definition, is valid. But this does not necessarily hold for the theory that motivates the stipulation.) One theory is that we can neatly sort out — in thought if not in deed — the natural that is universal from the conventional which is not. The fact is, we cannot. We do not

know what is human nature, and even if certain traits are shared by all humans hitherto, it does not follow that we cannot replace them by something suitable enough, or even more suitable. The Greek philosophers themselves knew of instances, such as the sweetness of revenge, which, they quite rightly declared, should be no temptation for educated, civilized people. It still remains to be seen if we can have a stable society whose leadership and whose majority are not given to envy, jealousy, and vengeance. Hence we still do not know what is the place of these feelings and instincts in human nature.

The second theory behind the dichotomy between nature and convention concerns us more. It is the hypothesis that what is not natural is not rational but capricious and arbitrary. The focus of all this was — still is — political philosophy or the theory of the sovereign. Some political thinkers find natural the endorsement of the authority of government. Others consider government conventional and so not binding. Still others see the need for government natural yet any specific one conventional. Yet, some view the convention as binding, because it is a part of a contract. Of course, a contract binds one side only as long as the other keeps the agreed terms. (So, authority is endorsed by human nature only as long as it is not abused, and only to the extent that the rules do not violate human nature.) Considering all this, we can easily see the great scope for political philosophers to judge regimes, governments, and the conditions under which these or those obligations apply to individuals.

Moreover, the corollary that we can change conventions at will really means that an individual may be able to leave society, for example the city-state, and join another. Or, it may mean that citizens may rebel with less effort than is required to violate laws of nature. A right rebellion may then be bloody or bloodless, as long as it is conducted in accord with Nature.

How much truth is there to all this? How plastic, how pliable, how adjustable, are human beings? Can one replace one's

childhood friends, one's childhood religion, one's mother-tongue, one's artistic taste and scientific opinions?

Somehow we take children as our point of departure. We assume that they exhibit the utmost pliability or plasticity, and can be transferred from one society or climate to another with much less trouble than adults. This is not to say that children could not exhibit a higher plasticity than hitherto. Twentieth century children do, in point of obvious fact, have a better occasion to show plasticity, e.g., withstand modern modes of transport, than children of earlier ages. Nor is it obvious that adults cannot recover childlike plasticity.

Nevertheless, there is a childish innocence in Greek Presocratic social philosophy, a childlike optimism, emulated and retained in some of Plato's early dialogues. It is the assumption — obviously false — that adults are by nature unbound by convention and so really free to change. They are not — in point of obvious and cruel fact. The challenge of Presocratic philosophers to give up all sorts of conventions, was repeated millennia later by modern philosophers, by the ideology of the whole movement of the Enlightenment. It is too much to hope for.

Can we prolong our childhood — at least in some respects? Can we replace lost childhood traits by some adult traits so as to preserve and even enhance our adaptability, plasticity, pliability, adjustability?

At the age of eighty, says the Gospel of the Brothers Barnabas (Bernard Shaw, Back to Methuselah), one is a mere child. Shaw refers to the fact that knowledge is a means of adaptation, and we have so much to learn that eighty years of a lifetime will just not do. Diverse writers have objected, none less than philosophers and historians of science. And for a quaint historical reason.

The theory that permeated the age of Reason or the Enlightenment most was Bacon's doctrine of prejudice — a doctrine shared by practically all the philosophers of the

Enlightenment Movement. It says that once we hold a false view as if it were true, we become absolutely rigid. Once we give up all false views, we become absolutely one with nature. The false views that enslave us were called idols of the mind. Presumably, they enter the mind stealthily. Once one entertains a hypothesis, however tentatively, one starts applying it and so verifying it and so one cannot help but conclude that it is true, no matter how perverse it really is. This doctrine of prejudice or of idola explained the darkness of the dark ages and the faults of even some of the best scientific minds around. This doctrine was refuted by the change of the world of science from Newtonian optics to a wave theory of light. So thought William Whewell who developed an alternative empiricist theory of science that incorporates the idea that researchers invent hypotheses and then test them.

In accord with Bacon's doctrine of prejudice, refutations do not eradicate error. A number of researchers declared that quite in accord with that doctrine, people did not switch to the wave theory. Newtonian optics died with the last of the Newtonians. In his celebrated scientific autobiography of 1947, Max Planck complains that if ever an idea of his was accepted it was for other people's reasons, not his. He added that he had failed to convince his peers or his teachers. People never change their minds, he bitterly concluded, but they die and are replaced so that progress is made possible.

This idea was used against Shaw, e.g. by Derek J. de Solla Price. If we all live too long, he said, we will all be old fogies.

This is my point of departure. I agree that in fact we are only plastic when young, with very few exceptions. But I think we need not lose hope: we can prolong life and we can also prolong infancy.

Obviously, language does not fit the dichotomy of nature versus convention. Obviously, it tells us that childhood naturally ends with adolescence. If we can do something about it, then we shall show that convention is far from being arbitrary, but that the ability to replace it with relative ease depends on our

relative ingenuity. This may be shown by making it artificially possible for adults to pick up languages as children do, or almost as well, and supplement the defect by adult intelligent transfer of verbal knowledge.*

*Note: For more details and references see Chapter 2 of my Towards A Rational Philosophical Anthropology, 1977.