

LET THE WORDS, TOO, BECOME FLESH¹

EARL W. STEVICK

ABSTRACT

Being ‘in the flesh’ (Latin *in-carnate*) can be applied to missionary language learning in two senses:

(1) Whatever we do in this life, we do through use of fleshly equipment that has been issued to us by our Creator. The part of that equipment most conspicuous in language learning is the brain. We make things easier for ourselves when we conduct our learning and teaching in ways consistent with how the equipment works.

(2) In taking on flesh for our sakes, Christ made Himself vulnerable to disrespect, disgrace and death which He might otherwise have avoided. In pale imitation of that Incarnation it behooves us, both as Christians and as learners or teachers of languages, to abandon some common kinds of self-protection.

INTRODUCTION

When you start out to talk to an audience for more than 5 minutes, you really should open with some kind of an attention-getter: — maybe a joke or an anecdote or something. Looking now at the title I announced for this paper, I have an awful feeling that this title may be an attention-getter of the wrong kind — an attention-getter that takes one of the most precious phrases in all of Scripture and seems to want to make a pun from it. That’s not at all my intention, however.

I’m no theologian, but remember the parable of the tenants and the vineyard, in Luke 20. In that parable, God’s people as tenants of His vineyard had been, as we would say these days, “underperforming” on their assignment. God gave them the Law, but they still fell short. He sent the prophets, but that didn’t do the trick either. Then finally, God resorted to something unprecedented., and “the Word became flesh and made his dwelling among us”. (John 1:14a), and from then on,

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God's people were able to work in terms of not just a thoroughly explained written document, but in terms of "that...which they had heard... seen with their eyes, and looked at, and their hands had touched." (1 John 1:1 NIV)

The new arrangement didn't entirely do away with underperformance and violations, and as we know, it actually turned out to be in its own way quite expensive, but whoever has been a beneficiary of God's Word becoming flesh can certainly vouch for its effectiveness.

So why did God's Word have to become flesh? I suppose simply because God's people were flesh (Gen. 2). Of course, God's purpose in Christ had been to do something that only the Incarnate Son of God could do — something that He did do, something that needed to be done only once. But (and here's where the first aspect of my title comes in) we as God's people have countless lesser things to do, including language learning, and those things must be done with and through the fleshly equipment that God has given us. And whether we like to admit it or not, we are creatures who are in-flesh, which is of course the meaning of the theological term "incarnate."

Notice that God doesn't always act in an "incarnate" mode. In the very beginning, he simply imagined, decided, and spoke accordingly, and that was all there was to it. (God needed only say "Let there be light," and sure enough there was light!) A lot of our trouble, at least in learning, comes from that old Eden temptation: We want to "be like God" in ways that are not open to us (Gen 3:5) — we want to act "discarnately" too!. What I mean to say is, when we learn (or when we teach) we would like to have things happen when and as we want them to happen, without our having to go at it in a way that's consistent with the fleshly nature of our God-given equipment.

THE EQUIPMENT

Since the last time I was in Colorado Springs, in 1945, my ideas about language learning have changed considerably. My central theme in this paper is just to list six points that researchers outside of the fields of linguistics or language teaching seem to be discovering about how the "fleshly equipment" we use for language learning works, and I'm going to support and illustrate those points with a few examples of what various learners, teachers and just plain users of various languages have done.

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First of all, way back in 1950, I got a master's degree in language teaching. At that time I thought I knew approximately 97% of everything there was to know about learning and teaching languages. I didn't think too much about the physical equipment, because I'd been taught in my Master's program that we can't look inside the brain anyhow — we can't observe the workings of the brain — and so we should just think of the mind as a wonderful black box and turn our attention to other, more manageable matters. (This was of course long before such technologies as Positron Emission Tomography.)

Betsy Barton

And I went on thinking that through quite a few experiences stretching over about 14 years, clear up until the time when I met Betsy Barton.²

Who was Betsy Barton? In 1964, the Peace Corps was training a group of Volunteers for service in a Central African country. About halfway through the program, the language director was disabled by a non-fatal heart attack. Because I had had some experience with a neighbor language to the language that those trainees were studying, I was sent to fill in as temporary language director.

I found a generally well-running program, in which almost all of the trainees were recent college grads. Betsy Barton was the conspicuous exception. Betsy was a very pleasant woman about 65 years old, and recently retired from a career in biochemistry. And Betsy was having no success at all with the language aspect of the training.

Now why — that is, why, in terms of her language-learning equipment — why was Betsy so much slower than the rest? In ancient times, the fleshly equipment for learning and remembering was sometimes compared to a smooth wax tablet just waiting for experience to leave grooves on it. So I decided that maybe in that sense Betsy's "wax" was simply a lot harder than everybody else's "wax" was.

Then one day I noticed something that really opened my eyes. What I noticed was that once when Betsy was required to work with some sentences that pertained directly to her personally, she brightened up considerably, and what's more, she performed about as well as the average student in the program. Her equipment hadn't changed, but her performance certainly had! So I experimented with transforming the content of the existing lessons into a format where Betsy could learn one question at a time, plus a few possible answers to it, and then practice asking and answering that question in simple information

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exchanges with other students. To tell the truth, the idea was not mine. I borrowed it from Thomas Cummings, who was a teacher of missionaries in India early in the twentieth century. I gave the format an up-to-date-sounding name, and it actually enjoyed great popularity in Peace Corps language training programs for several years.

Now, what did I learn from this experience? The main thing I learned, I think, was that Betsy's mind was not just a wax tablet, and that [and here's the first of my six points] personal meaning, and personal involvement, can cause one and the same piece of equipment to work ever so much better.

"Ash" - "Bush"

If memory isn't like a wax tablet, maybe it's more like a pile of Kodachrome transparencies, that can be brought back and projected again, and cut into pieces or overlaid on one another so as to produce new combinations for storage back in the pile. That is another comparison that's sometimes been made. But one day I was talking at work with a colleague named Gary, and I happened to mention a friend of mine named Russell Ash. Then, a few minutes later in the same conversation, Gary referred to my friend as "Mr. Bush."

Now, where could that "linguistic error" have come from? Let's take a look at the word Gary actually heard me say: "Ash." We know several things about this word "ash." Some of them have to do with its form: It's a single syllable, it has such-and-such a vowel followed by such-and-such a consonant, and so forth. Other components have to do with its meaning, or rather with its meanings: It can be used as a proper name. It's the name of a kind of tree. It stands for part of the residue of a wood fire. And there were certain facts about its use in Gary's and my conversation that also entered into his experience of it: It was the name of someone I had mentioned. The mention took place at such-and-such a time, and in such-and-such a conversation. And so forth.

The point I want to make here is that the experience of hearing the word "ash" did not get registered in Gary's brain as some sort of unit. No, in fact, [and here's the second of my six points] each component of the experience caused minute physical changes in a different part of Gary's brain.

So what Gary's brain had done, was something like this: He came to a place in the conversation where (1) he wanted to refer to the person I had mentioned earlier. He therefore (2) needed a personal surname. These two components had within

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the past few minutes been associated in Gary's mind, at least temporarily, with other components having to do with the form of the word and with its various meanings. So Gary's brain had come up with certain components of form, but not with all the others he needed in order to reproduce the name, and it had come up with a component of meaning, but this meaning component was left over from earlier experiences and happened to be the wrong one. And of course Gary knew that both trees and bushes are pieces of large vegetation. So from a list of the components it had retained, Gary's brain had filled in the missing parts, and had done this outside of Gary's consciousness, and had made the total product of this filling-in ("Bush") available to Gary for his conscious use.

That account may sound counterintuitive, but this little "Ash"- "Bush" story is actually an everyday illustration of a very basic fact about the memory apparatus, and that fact is that we remember — which is to say that we draw on what we've picked up from past experiences — we remember not by simply retrieving whole images or whole words or whatever, but [and this is my third point] by constructing what we need from parts that are at our disposal in various parts of our brain. So the brain may be in some ways *like* a wax tablet, and in other ways it may be *like* a massive file of transparencies, but it *is* — it physically *is* — a very active set of networks. ³

And since these networks are put together on the basis of past experiences, and since no two people ever have exactly the same set of past experiences, you can see that each person's networks are unique to him or her. It's as though each person has a house, with kitchen, living room, bedrooms, and so forth, and each person could if necessary get along in someone else's house, but people can get around, and they can find things, ever so much faster and more easily and more surely in their own homes. In terms of memory, this translates to the fact that one remembers things better — whether dates or formulas or foreign words — if they have somehow gotten to be tied in with one's own history and one's own needs and interests — that is, with one's own set of pre-existing networks. Remember "Betsy Barton"? I think this was part of the reason why "Betsy" did so well with the revised lesson materials, for example.

What are the practical implications of what I've said so far about the created physical equipment that we've been given to use? :

One thing I've said is that the brain is a living and very active set of networks that connect components of many kinds. And because the brain is living and active,

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we shouldn't try to *act on* it as if it were an inert wax tablet or something. What's better is to *interact with* it.

And I've said that everyone's set of networks is in some ways different from everyone else's. This uniqueness is one reason for using methods and materials that take learners' specific needs into account, and that allow for learner input.

Marine embassy guards

One year, we at the Foreign Service Institute were given several groups of US Marines to train as security guards for embassies in various countries of the world. The challenging part was that these men were not actually going to have much use for the language in general, but when they did have occasion to use their knowledge of the language, the stakes were going to be unusually high. There was a corresponding bit of good news, and that was that we could be sure our students would be taking their language study very, very seriously.

I'll spare you the details of method and materials. I do need to tell you three things: ⁴

1. We were very careful to select the contents of the course, and I don't mean just the general subject matter or just a list of vocabulary; we actually selected the individual sentences.
2. As soon as the marines had learned some small segment, they immediately used it in simulated activities.
3. As they mastered more and more bits of the language in this way, they engaged in longer and more complex simulations.

And that was about it. I'm happy to say that the courses organized in this way turned to be highly successful. But why were they so successful? Most obviously, of course, the sequence learn, then use, then accumulate is hardly new or astonishing. But I also believe there was a special ingredient here. The marines' knowledge of their mission, plus their strong convictions about its urgency, may have given to the simulations a vividness — a power — that many of the language teacher's ordinary "role plays" and "communicative tasks" sometimes lack.

Now what can we learn from this story? Remember I said that the physical equipment we've been given for learning things with consists of a set of very

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active networks that connect components of many kinds. There are visual components — many kinds of visual components, in fact — and auditory components, and of course there are the senses of taste, smell, and feel.

But there are also other kinds of components that don't fit in with the traditional so-called "five senses," and:

- Some of these components have to do with needs and purposes.
- The satisfaction or the frustration of needs and purposes leads to bodily changes, such as increased adrenaline, sweaty palms, or changes in muscle tone. These bodily changes are what we call "emotions."
- We can become consciously aware of some of these bodily changes. These awarenesses of bodily changes make up an important part of what we call "feelings."⁵
- So needs and purposes and emotions and feelings are all tied together. I would like to use the word "affect" as a cover term for all of them.⁶
- There's widespread evidence from a surprising range of clinical and experimental sources that those "networks" that play such a role in learning, and in remembering what we've learned, and in using what we've remembered — that *those networks are pretty much organized around and driven by their affective components* — that is, by how they relate to and embody things that the learner really needed or wanted to do

The point I want to make from this story [and this is #4] is therefore the overriding importance to the learning process of the learner's needs, purposes, emotions and feelings. There's a very important place for attention to affect on many levels: in the selection of materials, whether published materials or improvised materials; and in the kinds of activities chosen for use in the program; and even in the personal style of the teacher, if there is a formal teacher.

Mombasa

One time the Peace Corps office in Kenya invited me to come to Mombasa to help out in the reworking of a one-month program in Swahili. This program seemed to be competently-enough run, and the Volunteers had been coming out of it knowing some Swahili, all right. The trouble was that although those Volunteers

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knew some Swahili, they would cross the street in order to avoid having to actually *use* it, and so of course they very soon forgot it.

We had a wonderful training site. It was a small, old, colonial-style hotel outside Mombasa, on the coastline of Kenya, and we had exclusive use of it. When the trainee Volunteers arrived a day or two before actual language study was to begin, we found that most of them had been together for a whole semester in a preliminary stateside program of some kind, and that they already knew one another to the point of having become quite clubby. Unfortunately, their clubbiness did not extend to any Africans (or to me, for that matter), and some of their behavior during the first 24 hours was frankly appalling, clearly suggesting uneasiness in and distrust of their new environment.

Again, I'll spare you the details of method and materials. We decided on a schedule that consisted of an hour-and-a-half of instruction before breakfast, followed by breakfast, followed by another hour-and-a-half of instruction before the morning tea break, followed by a third hour-and-a-half of instruction between the tea break and lunch.

The key to it all was that each hour-and-a-half prepared the Volunteers to elicit, exchange, and react simply to a very sharply limited range of information: name, preference for tea or coffee, weather, and so on. Then the trainees were given very specific tasks to perform at the meal or during the break immediately following the instruction period. (Tables at mealtime seated only four, and there was one Swahili speaker at each table.)

Afternoons were for other activities, not all of which had to do with language, but the linguistic activities soon became very interesting. Two especially still stick in my mind. On about the fourth afternoon, the Volunteers were sent out to find places to stand on the edge of a wide sandy path that ran beside an inlet near the hotel. What they had to do was simply to interact in any way at all with the passers-by. The other afternoon activity that I remember, about a week later, was to go over to a nearby Salvation Army school for blind children and just spend a half hour or more with one of the students there.

I had to leave before the end of the program, but the report was that these Volunteers left the four weeks knowing about as much Swahili as their predecessors. The difference was that they would walk across the street in order to *find* an opportunity to use their Swahili.

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I'm not entirely sure just what lesson to draw from this experience, but I'll tell you what I think. You notice that the basic approach was similar to what we did with the Marines. That is, the trainees learned just a little bit and then immediately put it to some kind of real or convincingly simulated use, and they gradually built things up in that way, and throughout we took into account the trainees' needs, purposes, emotions and feelings — that is, what I've been calling their "affect." But affect is not just a plus-or-minus thing; it's not something that at some given moment is either just "good" or just "bad." Affect also has depth to it, [This is point #5.] and sometimes affect can run very, very deep. The fear and distrust that these Volunteers had been showing for their new environment and for the people who lived in it could have been enough to have defeated even the best method. Those active networks I've been talking so much about would still have contained enough apprehension and enough disdain so that even a little success in learning mere language could easily have taken on a negative value in their minds. Actually I think we owed a lot to those dependably kind and good-humored people along the path and at the Salvation Army school, for all the ways they met the trainees' needs for reassurance, for acceptance, and just for a smile and a friendly voice in an unfamiliar tongue!

My "great leap forward" in Turkish

Let me tell you one more brief story to make one last point. In the summer or 1976, I was working in a program that left me with lots of free time on my hands every day, so I decided to improve my Turkish. I already had pretty good control of the sound system and the grammatical structures of Turkish, so I decided to build my vocabulary. The means I chose was flashcards. First I read some brief humorous stories by a modern Turkish author, and then I extracted unfamiliar vocabulary from them. But these weren't just your old-fashioned word-to-word flashcards with the Turkish on the front and the English on the back. These cards allowed me to quiz myself not only on the other-language equivalent, but also on the immediate Turkish context from which I had extracted the word. I did this with two or three hundred Turkish words, and pretty well mastered them.

There was good news and there was bad news. The good news was that in this way I was recalling more meanings and richer meanings than I would have been recalling with simple flashcards. The bad news was that when I got back into

contact with Turkish speakers a few weeks later, I found that the effects of all that industry had completely evaporated.

What I learned from this [and here is my sixth and final point about the physical equipment] was that so-called long-term memory (LTM) is not so simple a concept as I had been assuming it was. Linguistic forms, when they are tied only to affective components that are shallow and perfunctory, are lost after a relatively short period of time, and they aren't always readily accessible for use when needed. This sounds like what Krashen and others have called mere "learning." I prefer to say that such linguistic forms are "in holding memory" (HM). And it's relatively easy for a teacher or a learner to select particular linguistic components — certain sounds, words, or structures — and get them into HM fairly quickly and dependably through focusing on form, and here I'm referring to such familiar activities as repetition and drilling, including flashcards. That's what I was doing with my cards.

On the other hand, it appears that linguistic forms tied to deeper or larger-scale affective components are retained longer, and are more readily accessible. Krashen would say they've been "acquired." In my terminology, they're "in permanent memory" (PM). And the deeper sort of affective activities simply don't take place when one is alone in one's room shuffling through a pack of cards. Hence my disappointing outcome in Turkish.

It seems likely to me that the difference between what Krashen and others have called discrete-point, academic "learning," and what they have called "acquisition" is really a continuum, and not the dichotomy that Krashen says it is; and second, that although HM is not the same thing as PM, still HM does have its place beyond being a mere placebo for those who think it's essential and become anxious if it is missing. In the deeper activities — the activities that tend to put things into PM — we can use not only what was already there in PM, but also anything that's available from HM, and as I noted above, we have a fairly good degree of control over what's in HM. This was the Volunteers in Mombasa getting a few safe conversation-starters into their HM and then going out and conversing with the people on the path near their hotel, for example. But the relationship between HM and PM can run profitably in the opposite direction, too, working on specific points of grammar or pronunciation by drawing examples from what the learners already have in their PM. This is a good way to clarify structure points, for example, and then the new clarifications themselves

can in their turn become raw material for the learner to use in new activities of the deeper, acquisition-producing varieties.

In the series of experiences and activities that make up a language-getting⁷ program, the formal components of the language — its sounds, its vocabulary and its grammatical structures — are inevitably going to be tied to affective components that are more or less deep, more or less large, more or less abstract, etc. The networks involved in some experiences, or in some activities, are large, complex, and affectively rich, while the networks involved in other experiences or activities are much less so. For that reason, the difference between these two kinds of experiences or activities makes a huge practical difference in language-getting.

This idea of a continuum between “learning” and “acquisition” is worth a little illustration. Let me give you just one series of examples based on how someone might gain control of the numbers 1-12 in a new language.

1. Let's start with the most basic. Just plain old-fashioned sitting down and studying lists of corresponding words for the numbers 1-12 in the two languages in preparation for a quiz tomorrow is a typical traditional study technique involving very restricted changes in the networks of LTM; and
2. saying the words for the numbers 1-12 as the teacher holds up flashcards with various numbers of dots on them adds a simple visual aid, thereby bringing about changes in more areas of the brain; and
3. playing dominoes with fellow students, and calling out the number of spots on each domino as it's played adds physical activity, as well as social elements such as competition, thus modifying still more areas of the brain; but
4. doing the same as part of a culturally authentic social event would, if I am right, lead to even richer, deeper, and more complex changes in the networks of LTM; and
5. doing all this under one's own initiative rather than under the direction or at the suggestion of an instructor should be deepest, most “acquisitive” of all.

Summary of the six points on memory

1. The first part of this paper has been about one facet of the created order: how our physical equipment for learning languages influences the role that personal meaning and personal involvement play in the learning process.
2. Different components of an experience are registered in different parts of the brain, but they also have some connection with other components that were registered at the same time. These connections make up (a network of) networks.

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3. “Remembering” is a process, not of retrieval of whole words or whole images, but of (re)construction from fragments found in those networks.
4. The networks that are used in (re)construction are organized around and driven by “affect” (i.e., by needs, purposes, emotions and feelings).
5. “Affect” is not merely “positive” or “negative”; it also has depth to it.
6. What is often called “long-term memory” can be thought of as including “holding memory” (HM: compare Krashen’s “learning”) and “permanent memory” (PM: compare Krashen’s “acquisition”). Activities that get material into PM generally involve relatively “deep” affect, while those that are most useful for getting material into HM are relatively “shallow.” These two kinds of activity can supplement each other.

MY EXCITING NEW METHOD

At this point in a keynote address, you have probably learned to expect the speaker to come forth with his or her own revolutionary proposal that’s going to make obsolete all other methods that ever came before it. I’m not going to disappoint you. I haven’t quite decided what to call my exciting new method, but I like to use alliteration from time to time, so if I were going to use my method with Shona, I think I’d call it “Shoeless Shona,” or for Uzbek I’d call it “Unshod Uzbek.” My method is based on a learning cycle that begins with four steps:

Get what you need.

Learn what you get.

Use what you learn.

Examine what you’ve used.⁸

For some reason, I have the feeling that if we followed this method for Greek, it ought to be called “Barefoot Greek,” but that doesn’t alliterate.

Any reader who is familiar with Larson’s work would be justified in thinking that I borrowed my exciting new method from him. That’s not the case, however. It’s true that I’ve seen some of Don’s publications, and he was even kind enough to send me a copy of his 1984 *Guidelines* book, which I admire very much. But at the time of preparing this paper, I hadn’t looked at any of Don’s stuff for 3 or 4 years, and with my non-retentive memory circuitry, I’d certainly have failed a test over it. Actually, I began working on what I was going to say here in Colorado Springs by trying to distill for my hearers a few of the findings about learning and memory that went into the 1996 edition of one of my books, and only in the last stages of preparing for the evening did I go back and look again at Don’s work.

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While it's true that I borrowed his *wording* for the steps of the learning cycle, the substance of what I have said in support of it really did come independently from experimental and clinical researchers outside the fields of education and language, some of whom may have had trouble passing the French reading requirement for their Masters degrees.

LETTING THE WORDS BECOME FLESH

So going back to my title for this paper, in what ways can we who *are* in the business of language and education let the "words" that get exchanged in a language program "become flesh"? Part of my answer to this question would lie in the area of materials and techniques.

- Traditionally (Grammar Translation, Audiolingualism, much Computer-Assisted Language Learning) we've usually tried to *act on* the mind of the learner. I have suggested instead that we concentrate on *interacting with* it. But what I've suggested takes patience, and it requires willingness to focus on the mind of the other person, rather than on one's own lesson plan, or on a curriculum.
- Traditionally we've always worked pretty much with printed or electronically recorded words, with perhaps a few simple pictures to provide context. I've suggested working also with rich, multisensory experiences that have some depth to them. But what I've suggested requires lots of labor and ingenuity and time.
- Traditionally, we've assumed that the same techniques that got *some* types of new material into HM would, if the learner would only apply the same techniques long enough or intensively enough, get *all* types of new material into PM. I've suggested that we need to distinguish between those activities that are best at getting things into HM and those that are most likely to get things into PM, and to play them off helpfully against each other in mutual supplementation. But what I've suggested requires an extra level of thinking on the teacher's part.
- Traditionally, it was assumed that learning is a basically intellectual activity. I have suggested that it's centered on and powered by affect. But what I've suggested requires one to deal with the frequent messiness of affect — that is, of the learner's needs and purposes and emotions and feelings.

But “letting the words become flesh” also has implications when it comes to power relationships. The trouble with “incarnation” is that it’s risky. One becomes vulnerable, and subject to criticism and correction, and to damage to one’s self-image. In the short run at least, both for teacher and for learner, it’s safer, and easier, and much, much more comfortable to remain discarnate. A student can remain safely discarnate by always making sure there’s someone else to blame for his or her linguistic underperformance. This can be accomplished by depending on a teacher and/or on a textbook. Similarly the teacher can remain discarnate by having the writer(s) of the materials; or the student’s aptitude and/or attitude, or some combination of these to blame for disappointing performance on his or her own part.

In my mind, doing all this work, subjecting oneself to criticism and blame, dealing with the sometimes messy affective side, showing extra patience, incurring unnecessary risks, and all the rest — whether it’s done by a person called a teacher, or by the learner, or by both — it seems to me that doing all this for the sake of the Gospel (and that’s what your people are doing) becomes almost a sacramental act, and that every classroom is a holy place where such acts can be performed.

In summary, then, I would suggest to you that there’s a definite relationship between what I’ve been finding out about how the fleshly equipment that we use in language learning *works*, and what Don Larson and others of you have been discovering about ways of *using* that equipment. And although I’m not a theologian, I believe that all this information fits in with — that it even exemplifies — some important ideas from Scripture: namely the general concept of human creativity but also human limitation within what God has designed and created, and the distinctive and crucial⁹ concepts of incarnation and self-giving love. After all, we did get both the equipment and the Scriptures from the same Source!

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by Earl W Stevick

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APPENDIX SUPPORTING CENTRALITY OF AFFECT

Roger Schank, as a cognitive scientist, ventured that “goals are the basis of memory organization. We remember an event primarily in terms of the goals to which it pertains.”

Speaking from the point of view of clinical psychology, Klein observed that “the perceptual system works as if it picks up a great deal, concerns itself with a little, and acts upon still less ... Whatever is registered, even though ‘irrelevant’ to conscious intention, may nevertheless persist and retain independent status ... Such peripheral registrations provide a source of discharge of active, though not dominant, motives, and ... *further, coordination with fringe motives is perhaps what gives permanence* or persistence to these perceptual registrations, i.e., creates memory residues.” [emphasis added]

Vernon Hamilton, a social psychologist, says that “the degree of satisfaction and utility which we derive from the external objects of experience become important components in the representational organization of cognitive structures.”

Damasio, a neurologist, “see[s] feelings as having a truly privileged status.” He points out that “they are represented at many neural levels, [just as much as] whatever is [brought in through] other sensory channels. But because of their inextricable ties to the body,” he says, “they come first in development and retain a primacy that subtly pervades our mental life. Because the brain is the body’s captive audience, feelings are winners among equals. And since what comes first constitutes a frame of reference for what comes after, feelings have a say on how the rest of the brain and cognition go about their business. Their influence is immense.”

Eric Halgren is neuroscientist, which is not the same as a neurologist.. Halgren comments that “relating material to the concept of the self is among the most effective encoding strategies to facilitate later retrieval of declarative memories,” and he adds that “the relation of a memory to one’s own particular life-history, and thus implicitly to one’s self-concept, is essential to episodic memory...”

Brierly, contributing to a book on the biochemistry of memory, states that "what is important and emotionally charged tends to be more rapidly embedded than that

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which is emotionally neutral or unimportant.” In another chapter in the same book, Richter says that “more than 99% of the sensory information reaching the brain is quickly forgotten. The small fraction selected for retention is not passively recorded, but is grasped as an active process by the living organism because of its apparent relevance to the basic drives, for possible use at some future date.”

Finally, here is a recent statement from the psycholinguist John Schumann. Schumann talks about the built-in drive to maintain whatever somatic value-preferences and aversions an individual has acquired over a lifetime. “These...value systems,” says Schumann, “form an emotional memory, which acts as a filter that appraises current stimuli according to novelty, pleasantness, goal/need significance, coping mechanisms, and self and social image. These appraisals guide our learning and foster the long-term cognitive effort... necessary to achieve high levels of mastery or expertise. The appraisals also curtail learning, producing variable success. This stimulus-appraisal system, then, is a major factor in the wide range of proficiencies seen in SLA, and SLA, in this formulation, serves as a model for SDL.”

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the Yerkes-Dodson Law (which is well supported by experimental evidence) would suggest that relaxation would help highly anxious subjects on difficult tasks, but impair low anxiety subjects on easy tasks. This may explain some of the observed inter-study variability.

Winton, W. M. (1987). Do introductory textbooks present the Yerkes-Dodson Law correctly? *American Psychologist*, 42, 202-203.

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¹ This paper was delivered as a Plenary Address at a conference in Colorado Springs in October, 1998. It is slated to appear in the proceedings of that conference, edited by Lorna Dickerson. 1

² Not her real name.

³ For a more detailed explanation of network activity, see the chapters on memory in Stevick 1996, 1998.

⁴ An account of these materials and procedures may be found in Stevick 1971, Appendix P.

⁵ This terminology is based on Damasio 1994.

⁶ This use of “affect” is not new to language teaching. It is consistent, for example, with Dulay, Burt and Krashen 1982.

⁷ I am using the awkward term “language-getting” as a cover term for what Larson and others call language “study” and language “learning.”

⁸ As many readers of this paper will recognize, this learning cycle is taken verbatim from Larson 1984.

⁹ No pun intended.