TO BE OR NOT TO BE:
E-Prime as a Tool for Critical Thinking

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E-Prime! The Fundamentals

Ambrose Bierce, in his famous *Devil's Dictionary*, defined logic as "The art of thinking and reasoning in strict accordance with the limitations and incapacities of the human misunderstanding." As we become conscious of our misunderstandings we improve the quality of our thinking, and most particularly our thinking about thinking, which Richard Paul defines as "critical thinking." In this article I will describe an offshoot of Korzybski's system (18, 19) known as *E-Prime*: English without any form of the verb *to be*. The name comes from the equation $E' = E-e$, where E represents the words of the English language, and e represents the inflected forms of *to be*.

Depending on exactly how one defines "word," most scholars regard the English language as embracing some one to two million "words," or lexical items. (Note 1.) In E-Prime one simply does without 20 or so of these lexical items; specifically, the *to be* family: *be, is, am, are, was, were, been, being*; plus

contractions — *'m, 's, 're*; plus various archaic and dialectual forms — e.g., *ain't*.

While statistically E-Prime only makes trivial changes relative to the English lexicon, it does affect the syntax. Even this effect, however, does not seem as severe as it might appear. This unexpected lack of severity proceeds from the well-known "richness" of the English language, which provides a wealth of linking verbs (become, seem, appear, verbs related to the senses), apposition, etc., that can take over most of our habitual applications of *to be.* On the other hand, E-Prime does admittedly entail the necessity of expressing the progressive aspect by using ". . . continues to ... ," and it makes use of the passive voice difficult or even impossible. (Note 2.)

In marked contrast with the areas of the lexicon and syntax, E-Prime delivers major and unexpected consequences to English semantics.

The E-Prime revision of English, although trivial in some respects, has deep underlying epistemological antecedents and consequences. Critical thinkers have struggled with the semantic consequences of the verb *to be* for hundreds of years. These distinguished persons include Thomas Hobbes (11), Augustus de Morgan (22), Bertrand Russell (24), Alfred North Whitehead (27), George Santayana (25), and Alfred Korzybski (19). Their concern, and ours as critical thinkers, centers upon two semantic usages of *to be,* Identity and Predication, that have these general structures in which TO BE represents an appropriately inflected form of the verb *to be*:

Identity: Noun Phrase₁ + TO BE + Noun Phrase₂
Predication: Noun Phrase₁ + TO BE + Adjective Phrase₁

Identity

Critical thinkers have argued against using statements having the structure of Identity because they immediately produce high order abstractions that lead the user to premature judgments. Consider the following statement:

John is a farmer.

The immediate consequence of such an identification at the very least brings about unjustified abbreviation, which can severely interfere with communication. For example, consider the following three sentences about John:

1) John farms three acres.
2) John owns and operates a 2,000-acre farm.

3) John receives $20,000 a year from the government for not growing anything on his farm.

We could even carry this illustration into a different dimension:

4) John, after living in the city all his life, has just bought a farm.
5) John grew up on a farm and has farmed there for 61 years.

Despite the fact that 1) through 5) make extremely different statements about John, most English-speaking people feel comfortable making the jump from any one of these statements to *John is a farmer*. Critical thinkers trained in general semantics hold that *John is a farmer* does not represent a valid higher order abstraction which could come from such observations as 1) through 5), but rather a possibly incorrect and certainly inadequate abbreviation of the larger picture.

Of course, due to the uniqueness of structures on the event level and the process character of 'reality,' no structure can have precise identity with another — or even with itself at two different times, for that matter. Hence we can categorically deny the validity of any Identity relation. And accordingly, any linguistic structure which conveys or assumes an Identity relation does not correspond well with 'reality.' As Korzybski might have put it, "The map does not fit the territory."

A decade before Korzybski, George Santayana described those matters somewhat poetically as follows:

> The little word is has its tragedies: it names and identifies different things with the greatest innocence; and yet no two are ever identical, and if therein lies the charm of wedding them and calling them one, therein too lies the danger. Whenever I use the word is, except in sheer tautology, I deeply misuse it; and when I discover my error, the world seems to fall asunder, and the members of my family no longer know one another. (25, p.123.)

Predication

Let us now consider *Predication*, as illustrated in the following statements:

a) The earth is flat.
b) The earth is round (spherical).
c) The earth is somewhat pear-shaped.

The verb *to be* carries with it a huge intellectual momentum of completeness, finality, and time independence. Still, each of the statements a) through c) does describe the earth adequately for some restricted purposes. This dual condition of adequacy-inadequacy seems characteristic of the Predication usage of *to be* and provides both its charm and danger.

Early presentations of Korzybski's methodology evidently did not clearly explain the notion of the "is of Predication" despite its importance. Classical logicians have applied the label "subject-predicate" to statements that use the "is of Predication" as their main term. As Bertrand Russell put it:

> The belief or unconscious conviction that all propositions are of some subject-predicate form — in other words, that every fact consists of some thing having some quality — has rendered most philosophers incapable of giving any account of the world of science and daily life. (24, p.24.)

Korzybski stated the importance of this matter in the following way:

> The subject-predicate form, the "is" of identity, and the elementalism of the Aristotelian system are perhaps the main semantic factors in need of revision, as they are found to be the foundation of the insufficiency of this system and represent the mechanism of semantic disturbances, making general adjustment and sanity impossible. (19, p.371.)

We may note in passing that the statements of both Russell and Korzybski contain one or more uses of the "*is* of Identity." (See Note 3.)

We can agree, I trust, that the Identity and Predication uses of "to be" do not reflect factual circumstances in the world as we experience it. For those die-hards among us who have some doctrinaire bias, or who otherwise did not pay attention, I shall recapitulate:

- Everything in the 'real world' changes: sometimes so rapidly that we may not notice the changes directly (as in the case of a table which appears solid), sometimes so slowly that we can (as in the case of a river).

- Every person, as well as every 'thing,' undergoes such changes.

- One particular verb in English — *to be* — carries with it archaic associations and implications of permanence and static existence that we do not find in the 'real world.'

We have devoted much of the preceding material to a discussion of the epistemological reasons for avoiding the semantic usages of the *to be* of Identity and Predication. Other usages of that verb exist, of course, including the following:

Auxiliary — *John is reading. Ivan is plotting. The rose is wilting.*
Existence — *I am. Descartes was. You* may *be, but then again ...*
Location — *John is here. That is neither here nor there.*

I have heard that I.A. Richards has allegedly distinguished between some 23 different usages of *to be,* but I have never seen the paper in question.

For many years, as noted above, several titans of critical thinking have inveighed against the Identity and Predication usages, *while continuing to use them.* Piecemeal attempts to avoid the undesirable usages of *to be* simply have not worked. E-Prime provides a simple discipline that *does* work. Even Korzybski and some of his most prominent students regularly fell into what we might call the "Is Trap." I shall give three examples of the "Is Trap" in action:

- *Korzybski.* Prior to the advent of E-Prime, Korzybski had more to say about the inherent dangers of the *to be* of Identity and Predication than any other critical thinker. And yet he himself fell into the "Is Trap" to the extent of using those two constructions in some 37% of his sentences in *Science and Sanity*.

- *Bois*. For a number of years the late J. Samuel Bois served as the chief lecturer for the Institute of General Semantics at their annual seminars. Many, including this writer, consider his book, *The Art of Awareness* (1), an excellent introduction to general semantics. And yet Bois used the *to be* of Identity and Predication in about 42% of his sentences in that text.

- *Read*. In a discussion of these matters, the noted lexicographer Allen Walker Read agreed that one should "call attention ... to the undesirable 'is of identity' and 'is of predication' (as in reference 23), but still rejected the most positive technique for doing more than just "call attention." Read sought to justify his rejection on the basis of a set of allegations that do not apply to E-Prime (e.g., the latter does not make it impossible to express the progressive aspect, the passive voice, metaphor, adjectives, and appositives). He continues to use the "is of identity" and the "is of predication."

Those three linguistically sensitive critical thinkers seemingly could not avoid the undesirable uses of *to be;* while allowing themselves the luxury of the other uses. At least, so they wrote — and spoke.

The Impact of E-Prime on Writing and Talking

In this part of the paper I will present four of the major consequences of using E-Prime in written and spoken utterances.

a. *Vanishing Questions*. One simply cannot ask a number of questions — some would say pseudo-questions — that have preoccupied many people. *What* is *man? What* is *woman? Is it art? What* is *my destiny? Who* am *I?* Such questions, by virtue of their semantic structure, set the stage for identifications and confusions in orders of abstraction. They tend to lead to discourse in which the likelihood of useful information generation or exchange declines precipitously. One might better ask questions on a lower order of abstraction such as these: *What characterizes man or woman uniquely? In what way can I relate to this art form, if any? What can I do* now *to improve my future possibilities? May I have another drink?*

b. *Vanishing Internal Instructions*. Various schools of psychotherapy have recognized the importance of the silent assumptions which we hold about the world and ourselves. Other schools, especially the "rational therapy" developed and practiced by Dr. Albert Ellis, also recognize the importance of what we tell ourselves, vocally and subvocally. "Self-suggested nonsense," Dr. Ellis calls this in its undesirable forms. Most of us have encountered people whose life patterns have decayed as they keep repeating to themselves such comments as these: "I *am* a failure, consequently ... ," "I *am* a success, therefore ... ," "She *is* a Catholic, so ... ," "He *is* a Jew, hence ... ," "I *am* a teacher, so what I am doing must be teaching," "Since I *am* the head of this household ..."

c. *Abbreviations*. Forms of *to be* encourage and indeed facilitate the making of abbreviated statements that may turn out to convey little or no information, although we often behave as if they do. For example, we often see such empty comments as: "It *is* clear that ..." "Well, business *is* business." "The problem *is* just a matter of semantics." Let us discuss that last assertion. While of course most human problems involve important (and usually unexplored because unper-

ceived) semantic issues, these issues do not evaporate just because someone has labelled them thusly. Some people use "It's just semantics" as an analysis stopper. One might productively respond to such a comment by pointing out, "Certainly; at least in part. Now let's try to clarify some of those semantic problems."

Confusion due to improperly abbreviating with *to be* even occurs in primary schools. All too frequently we still hear teachers insisting that children drill in arithmetic by saying "One plus one *is* two; one plus two *is* three; etc." The perfectly appropriate mathematical expression *equals* certainly need have no more inherent mystery for the young than *plus*. The unnecessary use of *is* in this context may have some responsibility for the difficulties some children experience with fractions. They can readily see the differences between 1/3 and 2/6. The first fraction may *equal* the second, but obviously some trouble could arise for those taught to translate "=" as *is*.

d. *Return of the Role Players*. As mentioned above, E-Prime makes use of the passive voice somewhat difficult. One may have to resort to constructions with the somewhat scruffy auxiliary verb "to get" as in "The work got done." Rather than a drawback, this consists of one of the greatest contributions of E-Prime. This facet of E-Prime forces users to bring the role players into explicit prominence or to indicate their ignorance of them. For example, many writers of technical and scientific papers forget that objectivity resides in the *persons* conducting the various experiments, etc., rather than in the passive forms used in reporting the results. I know of two instances in which scientists applied E-Prime to their complete report because this technique actually forced them to make explicit some important early details. One instance involved the failure of a sensor on a satellite, and the other concerned the fact that contractor personnel did not switch on a certain antenna. In both instances early versions of the reports in question said something like, "The data were not available." Subsequent digging for the role players brought useful information to light.

Politics and Language

In the years immediately following World War I, Alfred Korzybski observed the stark differences between the consequences of engineering and scientific activity and the fruits of political activity. He pointed out that, when engineers build a bridge it normally functions as designed. But when politicians "build" a

treaty or government, it usually collapses amid great human suffering.

Korzybski's analysis led him to conclude that the fundamental factor responsible for that discrepancy in performance consists of the structure of the languages used by those who design bridges and those who design governments. The engineers and scientists use a language (mathematics) which has a structure similar to that of the bridges, hence the language produces predictability. However, the politicians normally employ a language of archaic structure that uses static terminology in describing dynamic human socioeconomic issues. As Korzybski pointed out, to the extent that a treaty, constitution, etc., incorporates this kind of static-dynamic discrepancy, one may expect undesirable and unstable consequences.

To put this somewhat differently, Korzybski asserted in his books that dynamic social institutions, if based upon static premises, must ultimately collapse. And if we inquire into this matter semantically, we find that the use of the verb *to be* constitutes the main source of static premises and assertions in ordinary English.

Recognizing the insidious role which *to be* theoretically may perform in socio-political contexts, I analyzed several important, basic political documents. The purpose consisted of determining to what extent the language in the documents exhibited a static character, as indicated by their reliance on the "*is* of Identity" and "*is* of Predication."

I chose the following political documents for study:

a. The Constitution of the United States of America.
b. The Communist Manifesto.
c. Machiavelli's *The Prince*.
d. Robert Welch's *The Blue Book*.
e. Aristotle's *Politics*.

TABLE I
Political Document Study

Document	Sentences Analyzed	Per cent of Sentences With One or More Uses of Identification or Predication
Constitution of U.S.A.		
a. Main Body, no Amendments	99	20.2
b. Complete	166	21.6
Communist Manifesto	444	26.2
The Blue Book (sampled)	207	48.8
The Prince (sampled)	175	53.6
Politics (sampled)	188	60.1

Table I shows the results of the analysis of sentences in the documents noted above. Some distortion in the results may exist, due to the fact that the documents by Machiavelli and Aristotle exist as English translations. However, the original languages in both cases belong to the Indo-European family, so the distortion probably does not amount to too much. Marx and Engels allegedly wrote the "Communist Manifesto" in several "original" languages, including English. Engels supposedly edited the English version which I analyzed.

In my assessment, the results given in Table I, ranked in accordance with the increasing appearance of the uses of Identity and Predication, also correlate precisely with the great flexibility and power of our Constitution to the sterility of Mr. Welch's nightmare, and the rigid dogmatism of Aristotle. I submit that these results give quantitative substantiation for Korzybski's thesis.

Conclusion

Apart from any doctrinaire considerations, E-Prime can assist the user in attaining a kind of vigorous clarity that many have found worthwhile. Of course I know of only some of the people who have found E-Prime useful in their writing and speaking. However, E-Prime has found application in: one doctoral dissertation in physics (by Dr. D.A. Schwartz in 1968) (26), one licenciatura thesis in linguistics (mine in 1973) (5), a master's thesis in Biblical studies (by Byron L. Cannon in 1987) (7), a multi-volume research report by the U.S. Naval Air Systems Center (Project IMP in 1971), and a variety of papers published by myself, E.W. Kellogg, III, Elaine C. Johnson and Paul Dennithorne Johnston in the *General Semantics Bulletin* and *ETC*.

Of course, it pleased me greatly to learn that the noted psychotherapist, Dr. Albert Ellis, thought enough of the benefits of E-Prime that he re-wrote two of his books in this manner (*A New Guide to Rational Living*, with Robert A. Harper in 1975, and *Anger: How to Live With and Without It* in 1977). (9, 10) Scientific papers by Kellogg which show "E-Prime in action" have appeared in *Nature* (17), *The Journal of Bioelectricity* (14), and *The Journal of Gerontology* (16). Further applications have appeared in various places due to the efforts of C.A. Hilgartner, M.D., K.L. Ruskin, M.D., Charles Morgan, and T.J. Hefferon.

The diversity of applications described above testifies to the generality and utility of E-Prime.

I offer E-Prime to those interested in critical thinking as an easily teachable technique that has immediate benefits. In writing and talking it provides a method for materially reducing "the human misunderstanding." As the current ad for Nike athletic shoes puts it, "Just do it."

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NOTES

1. This conventional position ignores the names of the integers after some arbitrary cutoff point. Otherwise, we would have to say trivially that most modern languages contain at least a denumerably infinite number of words.

2. The comparatively minor syntactic consequences of E-Prime reflect the operation of the same linguistic functions that account for the fact that some natural languages lack a verb that corresponds exactly to *to be,* including Russian, Hungarian, and Mandarin at least. It seems interesting to note that the speakers of those languages alone account for about 20% of the world's population.

3. The lack of an adequate treatment of the "*is* of Predication" has led to some unfortunate confusion. The "*is* of Predication" statement has the basic structure given in (2) above. In the early days of the transformational approach to syntax, Chomsky (8) gave the following re-write rule for a sentence (S):

$$(N1) \ S \rightarrow NP + VP,$$

where *NP* represents *noun phrase*, and *VP* represents *verb phrase*. In pre-Bloomfieldian "traditional" grammars, linguists called the NP of (N1) the "subject," and the VP of (N1) the "predicate" (e.g., Jesperson (12, p.97). The slight difference in terminology and the great difference in significance between the philosophical *subject-predicate* and the linguistic *subject + predicate* provided the raw material for problems. For more on this matter see reference (21, p.121).

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"I perceive that we inhabitants of New England live this mean life that we do because our vision does not penetrate the surface of things. We think that that *is* which *appears to be*."

Henry David Thoreau in *Walden*