Language■

Florian Cramer■

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Software and language are intrinsically related, since software may process language, ar
the context of computing: formal languages in which algorithms are expressed■
and software is implemented, and in so-called “natural” spoken languages.■
There are at least two layers of formal language in software: programming language ir
the software as its symbolic controls. In the case of compilers, shells, and macro■
languages, for example, these layers can overlap. “Natural” language is what■
can be processed as data by software; since this processing is formal, however,■
it is restricted to syntactical operations.■
While differentiation of computer programming languages as “arti■cial■
languages” from languages like English as “natural languages” is conceptually■
important and undisputed, it remains problematic in its pure terminology:■
There is nothing “natural” about spoken language; it is a cultural construct■
and thus just as “arti■cial” as any formal machine control language. To call pr
as it obscures that “machine languages” are human creations.■
High-level machine-independent programming languages such as Fortran,■
C, Java, and Basic are not even direct mappings of machine logic. If progra
be called cybernetic languages. But these languages can also be used ou
machines—in programming handbooks, for example, in programmer’s dir
table jokes, or as abstract formal languages for expressing logical constr
such as in Hugh Kenner’s use of the Pascal programming language to c
aspects of the structure of Samuel Beckett’s writing.1■
In this sense, computer control languages could be more broadly de■
as syntactical languages as opposed to semantic languages. But this
both formal and semantic; although their scope extends beyond the
anything that can be expressed in a computer control language car
formal (and as such rather primitive) subset of common human lar
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■To complicate things even further, computer science has its
in the construction of a programming language interpreter or
as this interpreter doesn’t perform “interpretations” in a herr
semantic text explication, the computer science notion of “
linguistic and common sense understanding of the word, s
but syntactical manipulations of symbols.■
What might more suitably be called the semantics of co
programming languages: English words like “if,” “then,”
“goto,” and “print,” in conjunction with arithmetical and
“paste”; in graphical software controls, such as symb
Ferdinand de Saussure states that the signs of com
arbitrary2 because it’s purely a cultural-social conve
to concepts. Likewise, it’s purely a cultural conven
is restrained by what the human voice can pronor

Hello you!
And hello me!
What else is there to say?
With many apologies to the Beach Boys   and anyone else who finds this objectionable