GENETICS, SOFTWARE

## PARALLELIZED COMPUTER CODE AND DNA TRANSCRIPTION

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At <u>stackexchange</u> there is a super interesting discussion on parallelized computer code and DNA transcription (which is different to the <u>DNA-based molecular programming literature</u>...)

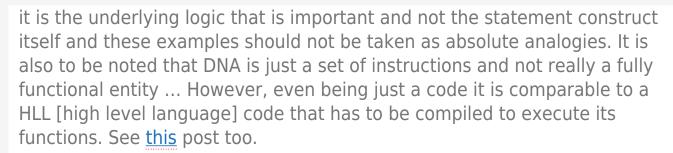
IF: Transcriptional activator; when present a gene will be transcribed. In general there is no termination of events unless the signal is gone; the program ends only with the death of the cell. So the IF statement is always a part of a loop.

WHILE: Transcriptional repressor; gene will be transcribed until repressor is not present.

FUNCTION: There are no equivalents of function calls. All events happen is the same space and there is always a likelihood of interference. One can argue that organelles can act as a compartment that may have a function like properties but they are highly complex and are not just some kind of input-output devices.

GOTO is always dependent on a condition. This can happen in case of certain network connections such as feedforward loops and branched pathways. For example if there is a signalling pathway like this:  $A \rightarrow B \rightarrow C$  and there is another connection  $D \rightarrow C$  then if somehow D is activated it will directly affect C, making A and B dispensable.

Of course these are completely different concepts. I fully agree with the further stackexchange discussion that



Please forget everything you read from Francis Collins about this.

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