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**Algorithm-less Information Processes?**

[ACM Ubiquity Blog](http://blog.acm.org/ubiquity/)

The opening article of the symposium on computation suggested that some information processes may not have a controlling algorithm. A reader said that would be a profound claim. As author of the opening statement, here's my take on it.

If, as do many of the contributors, you regard the information process as the fundamental entity, you are led to ask: "If I observe an information process, can I infer that it was generated by an algorithm?" The way some contributors define information process, it is not obvious that you can always observe an algorithm. So this is a legitimate question.

I suggested a definition of information process: a sequence of representations, with each transition controlled by a representation. This is more constrained than some of the other proposed definitions for information process -- for example, Paul Rosenbloom does not agree to the notion that each transition is controlled. If you accept my definition, then you can look for a controlling algorithm; but there is no guarantee you can find it. If you accept Rosenbloom's definition, you have no assurance there is an algorithm behind it -- but you can certainly search for one and test your hypotheses against the observed information process.

There may be countability arguments applicable here. What if the number of information processes is non-denumerably infinite? That is a possibility with continuous processes. Then there aren't enough algorithms to go around and most information processes would not have a controlling algorithm.

Notice that I am not making claims, just speculating about possibilities.