

GENETICS, PHILOSOPHY

NOISE IS NOT ANNOYING

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A new [Science Perspective Paper](#) writes about “reliable noise” which may not be the best description for a valid observation

the standard deviation of the fluctuations of a measured property, such as cell proliferation, over time in a single cell [...] or across a cell population, scaled to the mean of the measured property, is defined as “noise.” [...] they demonstrate that noise itself can generate a system that switches spontaneously between high and low gene expression.

Maybe noise should not be described by standard deviation but as an oscillation between different(semi-stable) plateaus. Compared to the atomic models, we are just at the Dalton stage with our current gene activity descriptions. Maybe we need to rethink that problem in terms of probabilities and move to the orbital model where an electron can potentially be found at any distance from the nucleus. The position, however, depends on its energy, making a position more likely in certain regions (see also the recent post on [flexible response](#)). Sorry, that’s not really “stochastic switching” but “fuzzy switching”, yea, yea.