The segment polarity network is a robust developmental module
– von Dassow, Meir, Munro, Odell. Nature 406:188-192, 2000.

- **Structure** The paper is structured with a TAIRDM format (as is typical for a Nature Letters paper). However, the structure is implicit without explicit signposting (also typical for a four-page Nature paper).

  The abstract (paragraph in bold font) seems a bit technical to me for a non-disciplinary journal with the background content taking up the vast majority of the abstract. The standard "Here, we..." is present but there is no follow-up sentence highlighting the broad impact of the observation.

  The introduction (first paragraph after the abstract) is terse and is difficult for the uninitiated to follow, typical of the Nature Letters format.

  The next paragraph is a concise methods summary (with more details at the end of the paper) to lead the reader in to the results section. The details of the translation from circuit diagram to differential equations, while a standard procedure, is completely omitted even though it includes a number of subtle non-algorithmic modeling decisions. This is common with modeling papers targeted at a broad audience that is not necessarily versed in modeling nor mathematics.

  The results are organized using a logical development - first the network that didn't work followed by the modified and successful network. Results are further organized by importance and progressive delving into details.

  The discussion starts at the bottom of the first column of the fourth page ("With our model..."). There is one clause immediately preceding the discussion that merits a slightly longer passage at the end of the discussion (instead of with the results) and that is "...and it seems likely that the evolutionary process could replace inputs relatively easily." This is interpretation and is not directly related to the results but is an important point to emphasize - conceptually, this paper is about evolution as much as development.

- **Scientific focus** The authors are interested in determining whether the cartoon models proposed by developmental biologists are sufficient to explain the observed patterning of insect embryos. The challenge here is that the developmental pathway is present across a huge range of species but similar throughout. They ask how can such a diversity of organisms use the same central module for early patterning. Robustness is the answer but where does that robustness come from.

- **Main result** The main result is that the known interactions plus two additional proposed interactions are sufficient to generate a module that is remarkably robust to parameter variation.

- **Modeling formalism** They used ODEs and solved them numerically. Other methods could be used but this seems like the optimal choice. For example, an agent-based tracking individual proteins would take much longer to gather sufficient statistics and the system is in the large-particle-number regime where ODEs do just as good a job. Some details could be treated with diffusion equations but to little advantage.

- **Hightlighting and framing** The highlighting and framing is well done. The message is clear and resonates through title, abstract, results, and discussion.

- **Audience** The paper is written for a broad audience and primarily people working on developmental pathways with an eye toward evolutionary questions.