

Extremely Important Re Academic Knowledge And Learning

From now on re academic study. What is much more imp. than remembering, is having info at-hand. (Cueing, referencing, practical reading and quick reference while trawling - prompt is on good course) is what matters for developing academic understanding of more advanced topics. Higher up we go, less we are assessed on re memory, more on understanding and

consolidation topics.

Plans add to make links to topics, on after that in the doc. No need to memory! good like databases as -> loc

Slave process: central command governs many other mechanisms.

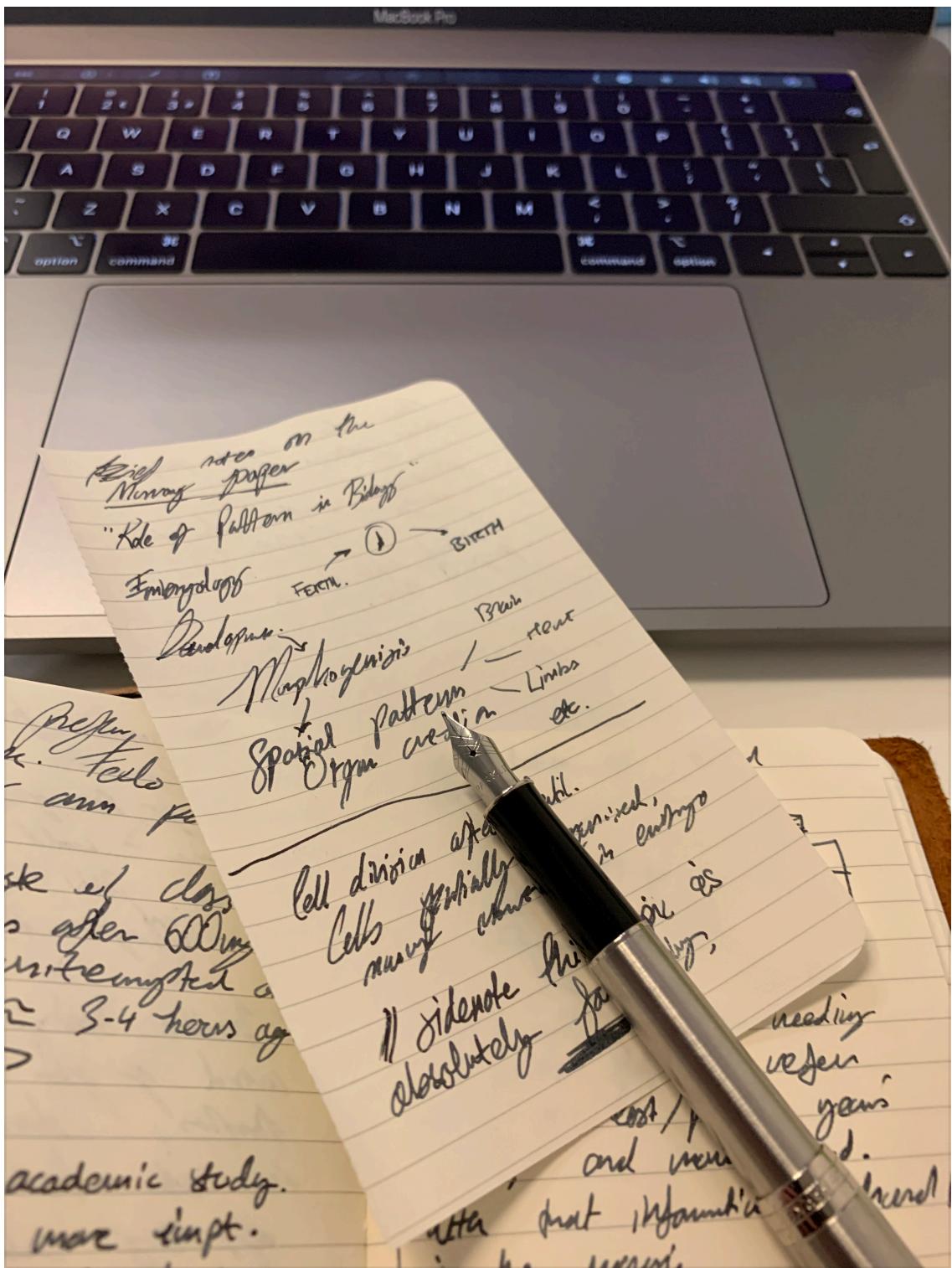
quail and guinea fowl (see, for example, Richardson et al. 1991 and ref). A literature search of positional information in development will produce number of references. Although it is a simple and attractive concept, which in significant advances in our knowledge of certain aspects of development mechanism.

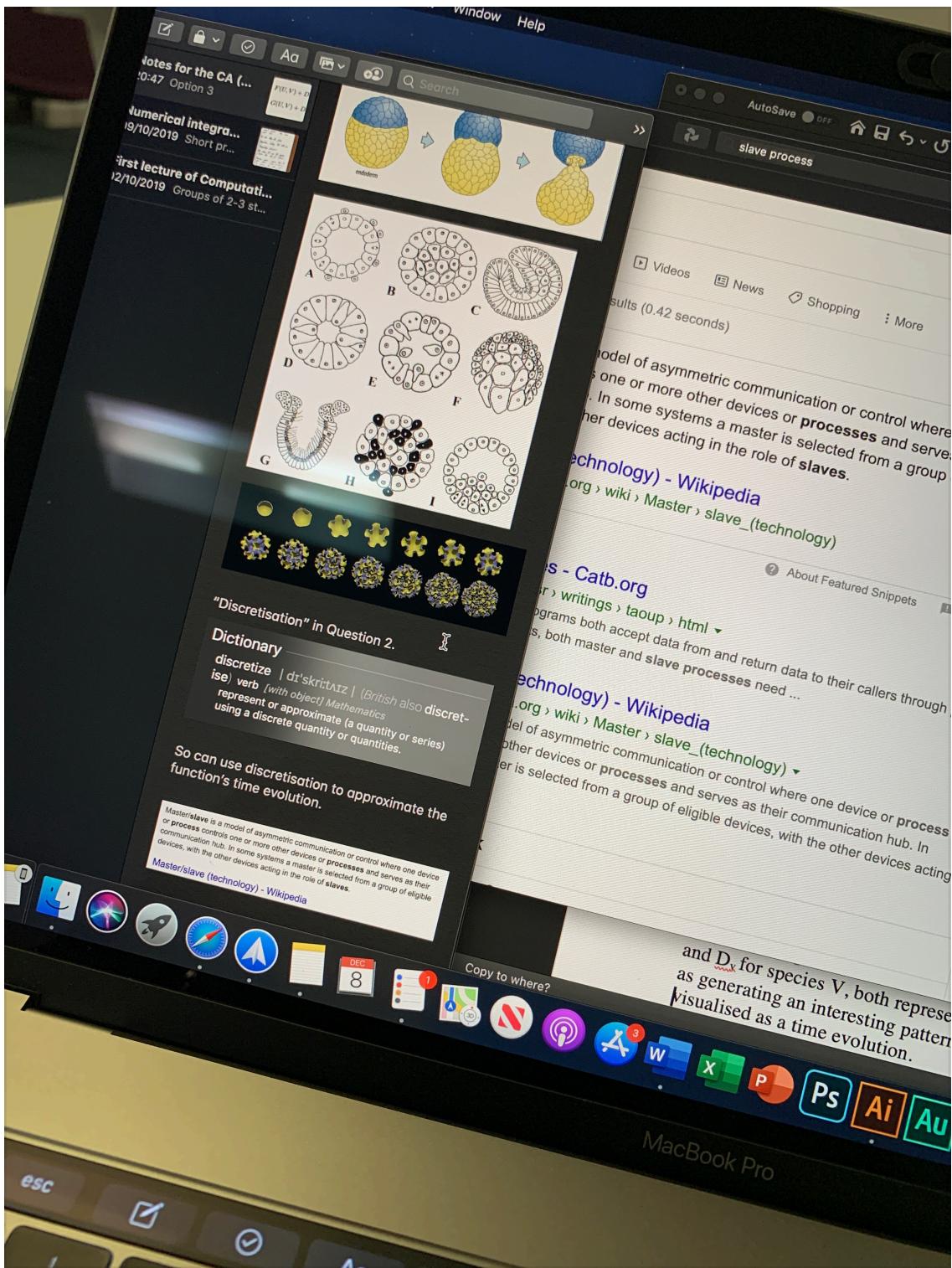
The chemical prepattern viewpoint of embryogenesis separates the development into several steps; the essential first step is the creation of a concentration spatial pattern. The name 'morphogen' is used for such a because it effects morphogenesis. The notion of positional information relies on chemical pre-specification so that the cell can read out its position in the coordinate of chemical concentration, and differentiate, undergo appropriate cell shape changes migrate accordingly. So, once the prepattern is established, morphogenesis is a process. Positional information is not dependent on the specific mechanism which up the spatial prepattern of morphogen concentration. This chapter is concerned reaction diffusion models as the possible mechanisms for generating biological patterns. The basic chemical theory or reaction diffusion theory of morphogenesis was put forward in the classical paper by Turing (1952). Reaction diffusion theory, which now has a vast literature, is a field of research in its own right.

With the complexity of animal forms the concept of positional information necessarily implies a very sophisticated interpretation of the 'morphogen map' by the cell. This need not pose any problem when we recall how immensely complex a cell is whether or not it is positional information or simply a cell responding in some way to small differences in chemical concentration. The scale of pattern that can be formed by reaction diffusion can be very small as seen in the experimental patterns shown in Figure 2.11. A very rough idea of cell complexity is given by comparing the weight per bit of information of the cell's DNA molecule (deoxyribonucleic acid) of around 10^{-22} , to that of, say, imaging by an electron beam of around 10^{-10} or of a magnetic tape of about 10^{-5} . The most sophisticated and compact computer chip is simply not in the same class as a cell.

An important point arising from theoretical models is that any pattern contains its

MacBook Pro





Notes in the book or source far more powerful than separate ones, since they reflect context. At this academic level, context is far more important than memory as a number of pieces of information can have different meanings when utilised.