When asked how long after graduation from their medical specialty before they felt competent in their job, most physicians report 5-10 years. When asked to choose a family physician from two candidates, one who is a recent graduate and a second who has been in practice 10 years, virtually everyone chooses the latter. Paradoxically, studies of recertification and relicensure performance based on written examinations uniformly show a linear drop with years from graduation. Evidently, practical experience is contributing substantially to our perception of competence, but its effects are not detectable by formal examinations.

In this talk, I explore the nature of diagnosis from a cognitive psychology perspective, using dual processing theory. I argue from evidence that diagnosticians have two parallel reasoning strategies: a rapid process based on an unconscious “similarity” match with previous examples and a slow, logical and conscious strategy based on application of DSM-like rules. A major role of experience is to provide the expert with a vast mental storehouse of clinical examples, and the act of routine diagnosis, just like everyday categorization of objects like dogs or trees, proceeds primarily by an unconscious mental similarity matching against a previous example in memory. The careful, systematic, deliberate application of diagnostic rules is a secondary process used for confirmation or when the correct diagnosis is not evident. I discuss the implications for clinical teaching.