Motion in the retinal image might be due to movement of an object, movement of the observer, or a combination of the two. So how are we able to identify movement of objects when we are moving ourselves? We have proposed a mechanism based on sensitivity to optic flow that allows the brain to "parse out" components of retinal motion due to self movement and so isolate retinal motion due to object movement. Over the past 5-10 years we have collected data that supports this hypothesis and goes some way to characterising how the process works. I will explain the basic problem, review what we have found, and provide a summary of some recent data that may change how we think about perception of motion.