Disfluencies in spontaneous speech have the potential to affect listeners in at least two ways: They may impact upon the moment-to-moment process of determining the speaker's intended meaning, and they may influence the listener's lasting impression of what was said. In this talk, I outline what we know about each of these types of effect, focusing on three sources of evidence. Evidence from a series of eyetracking and ERP studies shows that listeners update their predictions of what is likely to be uttered following hesitation disfluencies; and that they pay more attention to words which are uttered immediately post-disfluency. Participants in the ERP studies are more likely to later recognise having heard words which occur immediately post-disfluency, suggesting a link between short-term processing differences (in prediction and attention) and their longer-term consequences (in memory). Evidence from change detection studies confirms that words encountered post-disfluency are better encoded, and allows us to examine the range of signals that might be considered as “disfluent”. Evidence from feeling-of-knowing studies shows that listeners have reduced confidence in the veracity of statements that are disfluent, showing that disfluency affects the listener's metalinguistic as well as linguistic representations.