Laboratory experiments typically find behavior inconsistent with high orders of iterated dominance reasoning. This paper presents experiments designed to explain two key findings from previous studies: that subjects tend to perform few rounds of deletion of iterated deletion of dominated strategies, and that this type of behavior is responsive to their beliefs about the sophistication of their opponents. We propose three explanations for why subjects might not be doing more iterations. First, they might have problems computing iterated best responses, even when doing so does not require higher order beliefs. Second, subjects might face limitations in their ability to iterated best responses while generating higher order beliefs, or believe that others face these limitations. Finally, subjects' behavior might not be justified by cognitive limitations, but rather by their beliefs and higher-order beliefs about irrationality. We design two experiments in order to test these hypothesis. Findings from the first experiment suggest that most subjects' strategies (55%) are not the result of their inability to compute iterated best responses. We then run a second experiment, finding that about two thirds of the subjects' behavior seem to come from limitations on their ability be higher order rationality, or from their beliefs about others abilities. The remaining 34% of our subjects seem to be a best responding to beliefs and higher-order beliefs of irrationality.