Typically when a macroeconomist decides to investigate deviations from the mean with regard to macroeconomic performance, they will look at fundamental shocks. These come in many forms, and are generally built around very tangible concepts to include rapid or extreme changes in technology, government policy, goods prices, credit access, uncertainty, etc. For example, if a textile heavy export economy finds itself in a recession as marked by an increase in unemployment, gold prices, bond prices, national savings, etc. an economist may seek out the source of the disturbance by asking questions to do with changes in global textile prices, credit access for large export orders, or protectionist policies from abroad. What would very rarely be discussed by a macroeconomist is a question focusing on the emotional well-being of the population and the macroeconomy. It’s on this point that Professor Evi Pappa spends her time and resources. She argues that population wide sentiments can have a significant effect on macroeconomic fluctuations, and that when deviations from the norm are experienced, sentimental shocks should be evaluated as readily as fundamental ones, as well as structural changes.

Beginning with definitions and theory, Pappa argues that the mechanisms by which group sentiment can affect the larger economy are complex and many. As coined by John Maynard Keynes, they represent the “animal spirits” behind market confidence, and they are notoriously difficult to observe in a manner conducive to research. To emphasize this, Pappa asks that we imagine the economy as a river. The shape of the river represents a structural input, the amount of rainfall a fundamental input, and the number of recreational boaters a sentimental input. With a fixed cycle of rain and boaters it would be expected that the river would follow a rather constant course, the economic mean. If suddenly an unusually large storm arrives and floods the banks, the flow of the river would temporarily change and few if any recreational boaters would be around to maintain the waterways and shore. In economic terms, the economy would deviate from its mean due the fundamental shock, and individual’s would engage in risk-minimizing behavior due to their loss of confidence. Within this, it would be nearly impossible to separate which macroeconomic effects result from the shock and which from the consumer behavior. To compound difficulties, any attempts to analyze the effects of the fundamental variable on the sentimental would expose the researcher to an infinite number of candidate variables. In river terms, the researcher would be asking if it was the rainfall that kept the boaters away, the extent of flooding, or the temperature that day.
So what to do? Pappa argues that it’s possible to analyze the effects of sentimental shocks on the system by utilizing an instrumental variable that affects consumer confidence independent of fundamentals. In other words, she believes she has found a way to control boater quantities outside of river fundamentals in order to observe their effects on the regular flow. Specifically she argues that such a variable exists in the form of 98 mass shootings within the United States starting from 1960. Citing multiple studies which track PTSD episodes along with subjective well-being surveys, Pappa establishes that shootings produce depressive emotional effects across the US. Adding to this temporal restrictions via two month long reporting cycles on shootings, she was able to demonstrate in a robust manner that consumer confidence falls for up to 20 months after a mass shooting.

The effects of this negative relationship with consumer confidence were far reaching. As expected, Pappa found that the shock to confidence instrumented by mass shootings affects significantly economic fundamentals. More surprisingly however, is that she was able to find effects on monetary policy, and correlations with variables which reacted to confidence shocks in a manner opposite of what would be expected. She demonstrated that a sentimental shock can result in increases to unemployment, real gold prices, personal savings rates and AAA spreads. As for the unexpected outcomes, confidence shocks did not produce an inflation response that would be typical of an economic contraction. CPI prices actually increase, and stock prices remain unchanged.

As for why these effects manifest themselves in the way they do, Pappa says that is for further research. This is a new area of study, a new theory of effect, and a new method of approach. Surely there are critiques to come, but with such robust results at hand, it would be a hard case fought for any economist to believe they can continue to ignore the importance of sentimentality in describing the macroeconomy.