**METHODOLOGY**

A two-stage regression model for detecting anchoring is specified in Beggs & Graddy (2009) who themselves cite Genesove & Mayer (2001). The same model is used to detect anchoring effects in later papers such as Hong et al. (2015), and in general, may be estimated for goods that exhibit unchanging hedonic quality over time – a key assumption of their work. Intuitively, their model identifies anchoring by looking at two sales of an item, say a painting, at different points in time. By controlling for hedonic characteristics (artist, medium, etc.) and unobserved inputs into the past price (bidding behavior), the difference between past price and hedonic quality can be isolated, and identified as the anchoring effect on current price.

In the first stage of the model, Beggs & Graddy (2009) fit a hedonic regression in order to estimate predicted prices for paintings as a function of their inherent characteristics, while also controlling for temporal effects. In my replication results, I use the same hedonic variables as Beggs & Graddy on the same Impressionist and Contemporary datasets. For Impressionist art this includes painting date, length, width, medium of the artwork, indicators of authenticity (signed, monogrammed, stamped), and artist. For Contemporary art this includes painting date, length, width, medium, and artist. The temporal effects are modelled by half-year time dummies.

In the same vein as Beggs & Graddy, I take the natural log of prices and hedonic price prediction, which allows us to interpret the regression results as relative effects. Beggs & Graddy only fit this hedonic regression for observation pairs where a first sale and a second sale of the same item have been painstakingly verified against their presale catalogs. Because those are not available, in my replication analysis I make the assumption that duplicate observations in their Impressionist and Contemporary data refer to multiple sales of the same item.

In the second stage of the model, Beggs & Graddy specify the following regression in order to separate out anchoring from other effects.

Above, is the past sale of a painting at time and is the current sale at time. Beggs and Graddy fit several regressions where the response represents either the sale price, an indicator for whether the item sells (which involves a probit transformation), or the presale estimate. The anchoring effect is captured in the term, which specifies how the past price (the anchor) impacts the current hedonic price prediction, and thus the dependent variable. The last term controls for unobservable non-hedonic effects on price. For example, if the past price was not only a function of the painting’s hedonic characteristics, but was also a function of bidding activity at the time, this difference will be captured in the term. Otherwise, will not only reflect the impact by strictly past price on current hedonic prediction, but also past bidding activity and other non-hedonic inputs into.