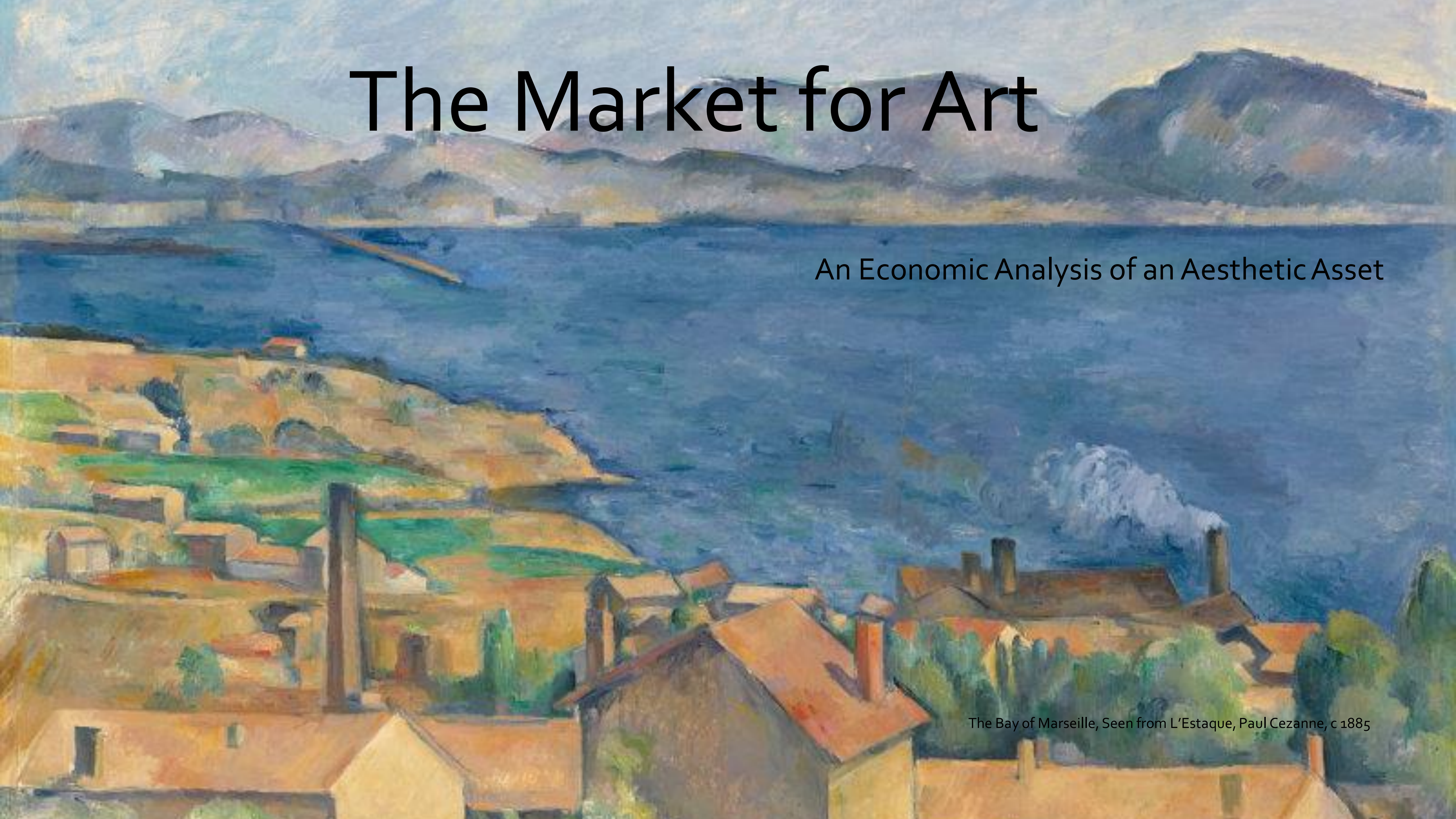
The Market for Art

An Economic Analysis of an Aesthetic Asset



The Bay of Marseille, Seen from L'Estaque, Paul Cezanne, c 1885

Income = Consumption + Savings

- Consume today
- Save to consume more tomorrow
  - Inflation
  - Reward for putting off gratification

The Blue Room, Pablo Picasso, 1901

Income = Consumption + Savings

- Types of savings
  - Guaranteed return i.e. fixed interest
  - Speculative return i.e. capital gain

Consumption v Saving

- Saving for financial return
  - Stocks
  - Bonds
  - Savings accounts

Two Anglers, Claude Monet, 1882

Consumption v Saving

- Consumption for utility
  - Food
  - Entertainment
  - Transportation

Consumption v Saving

- Goods that serve both functions
  - Real estate
  - Collectibles

Saving (Investments)

- Income generating
  - Stocks
  - Bonds
- Capital gain

Vibrant Landscape, Graham Gercken, 1960

Saving (Investments)

- Not all investments have both
- Capital gain only
  - Precious metals
  - Collectibles
    - Art
    - Beanie babies

What is art?

Illustration, Daniel Craig, c 2000

- Museum pieces
- Something I can pick up at Walmart

Mona Lisa, Leonardo da Vinci, 1503

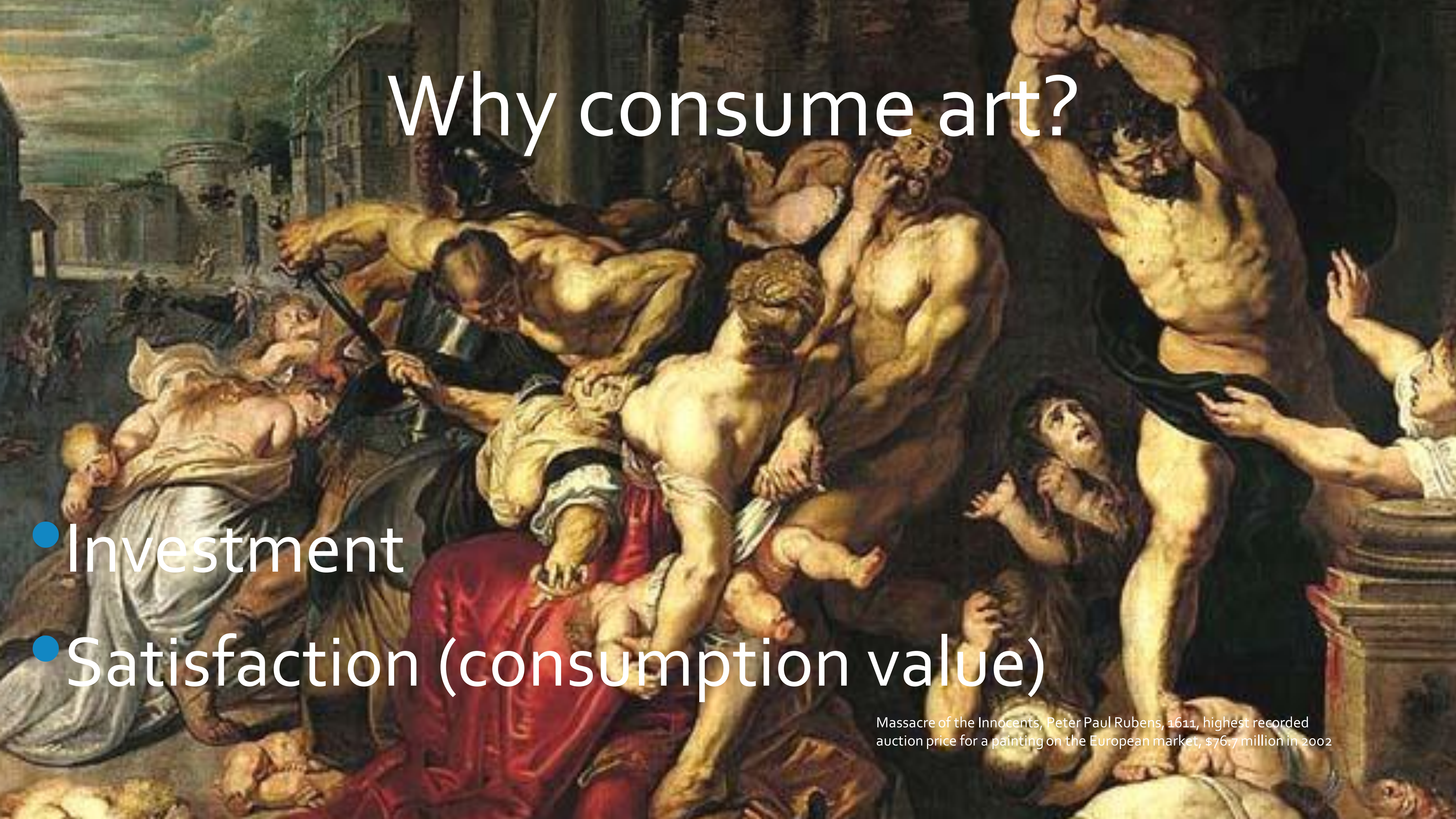
There is no fixed definition of art

- experts and scholars disagree on exactly what art is
- supply is somewhat arbitrary
- price determined primarily by demand for art

My Bed, Tracy Emin, 1998

Why consume art?

- Investment
- Satisfaction (consumption value)



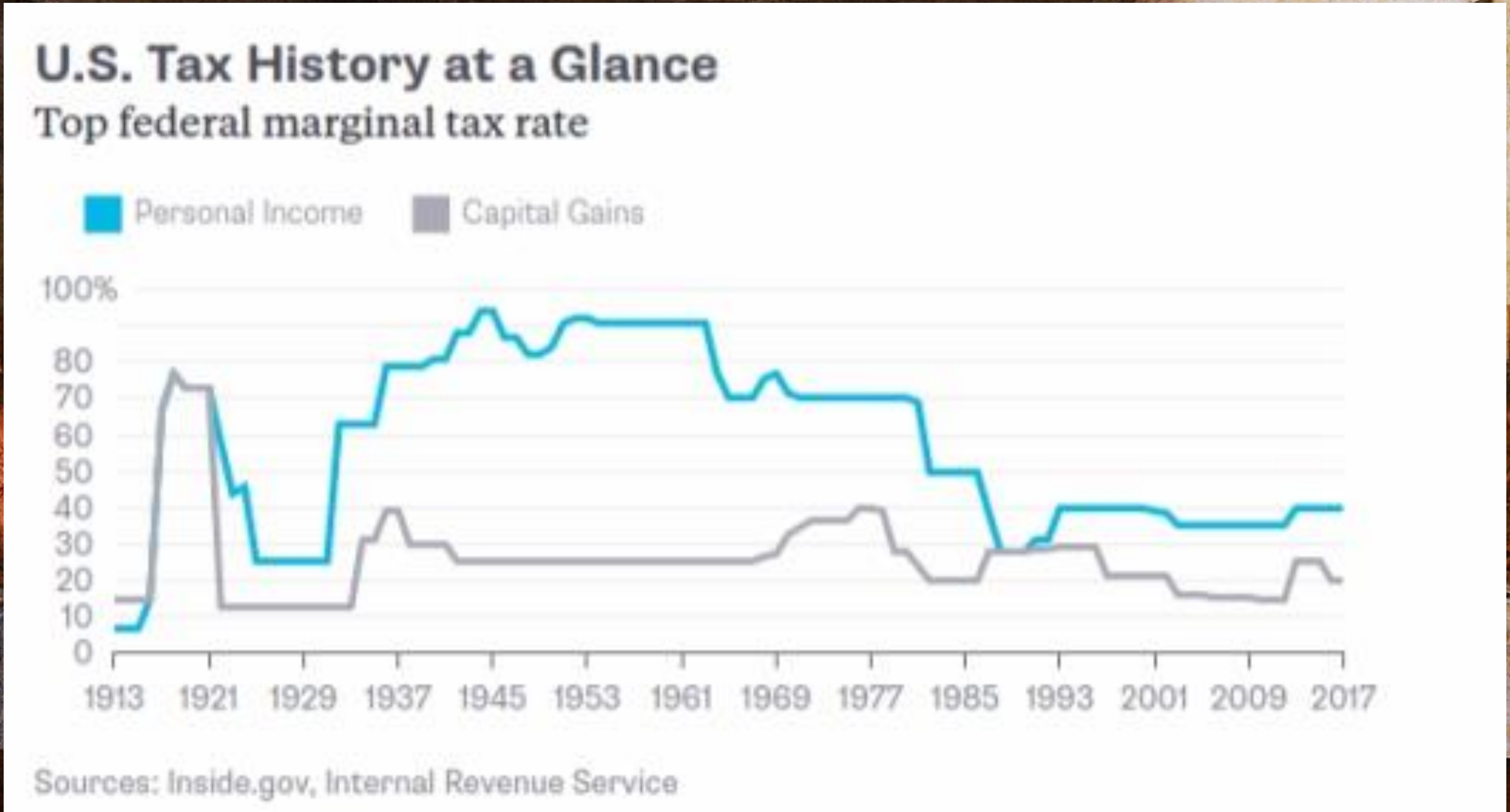
Massacre of the Innocents, Peter Paul Rubens, 1611, highest recorded auction price for a painting on the European market, $76.7 million in 2002

Who consumes (buys) art?

- The rich
- The rest of us

The Starry Night, Vincent van Gogh, 1889

The tax advantages of capital gains



The Last Supper, Leonardo da Vinci, 1495-98

Art as an investment

- Risk return tradeoff
- Minimizing risk through diversification

Woman on a Terrace, Henri Matisse, 1907

Art as an investment

- Does art correlate positively or negatively with equities?
  - Different studies come to different conclusions

Art as an investment

- Why the lack of consensus?
  - Thin market for illiquid goods
  - Do we compare prices only for the same painting that is resold? If so, we have few observations

- Or do we use hedonic measures, by comparing the prices over time of paintings with similar traits?
  - E.g. style (portraits),
  - medium (watercolor),
  - time period (18^{th} century),
  - artist (e.g. Picasso prints)

Banana, Andy Warhol, 1966

Venus de Milo, Alexandros of Antioch, 101 BC

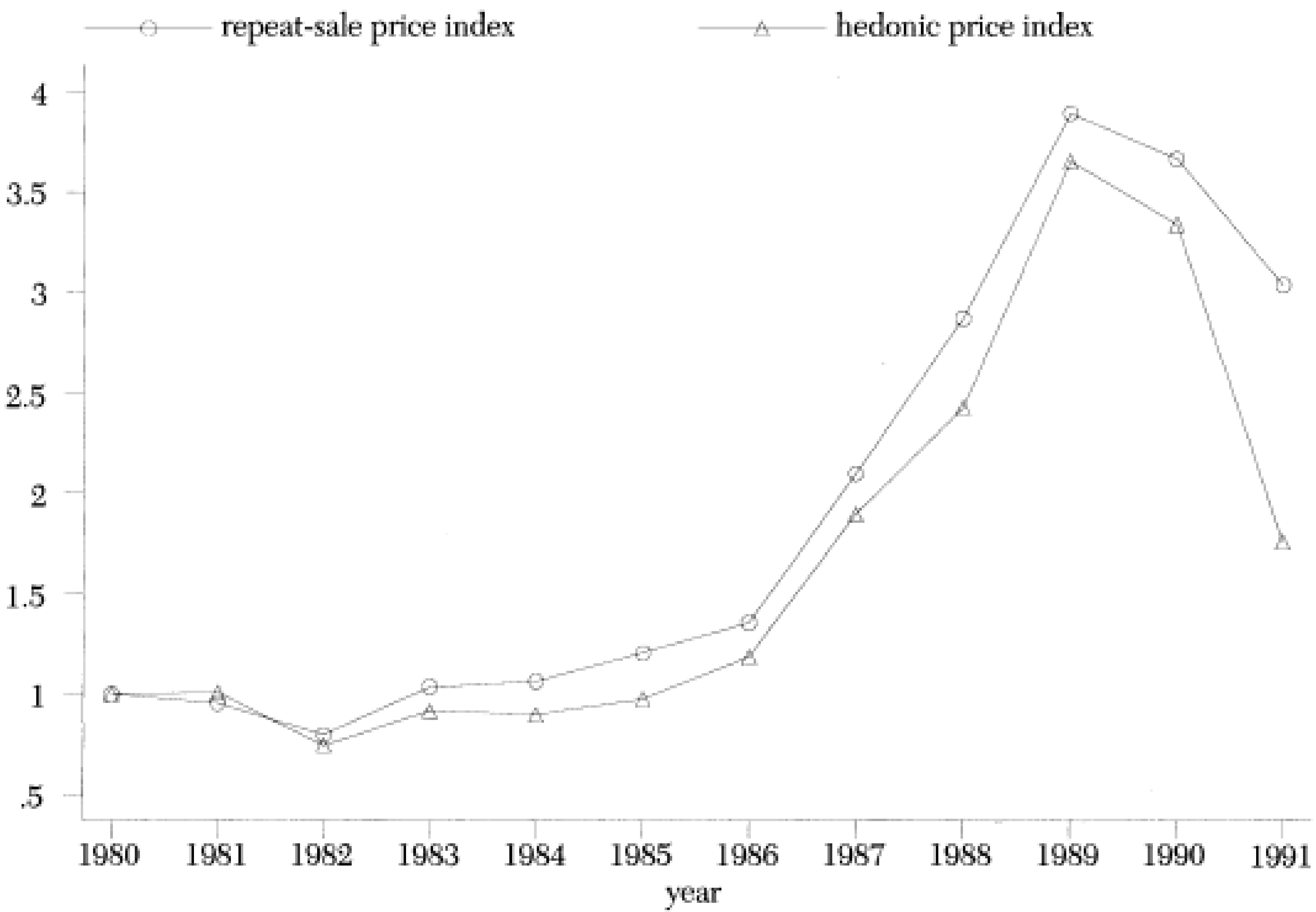
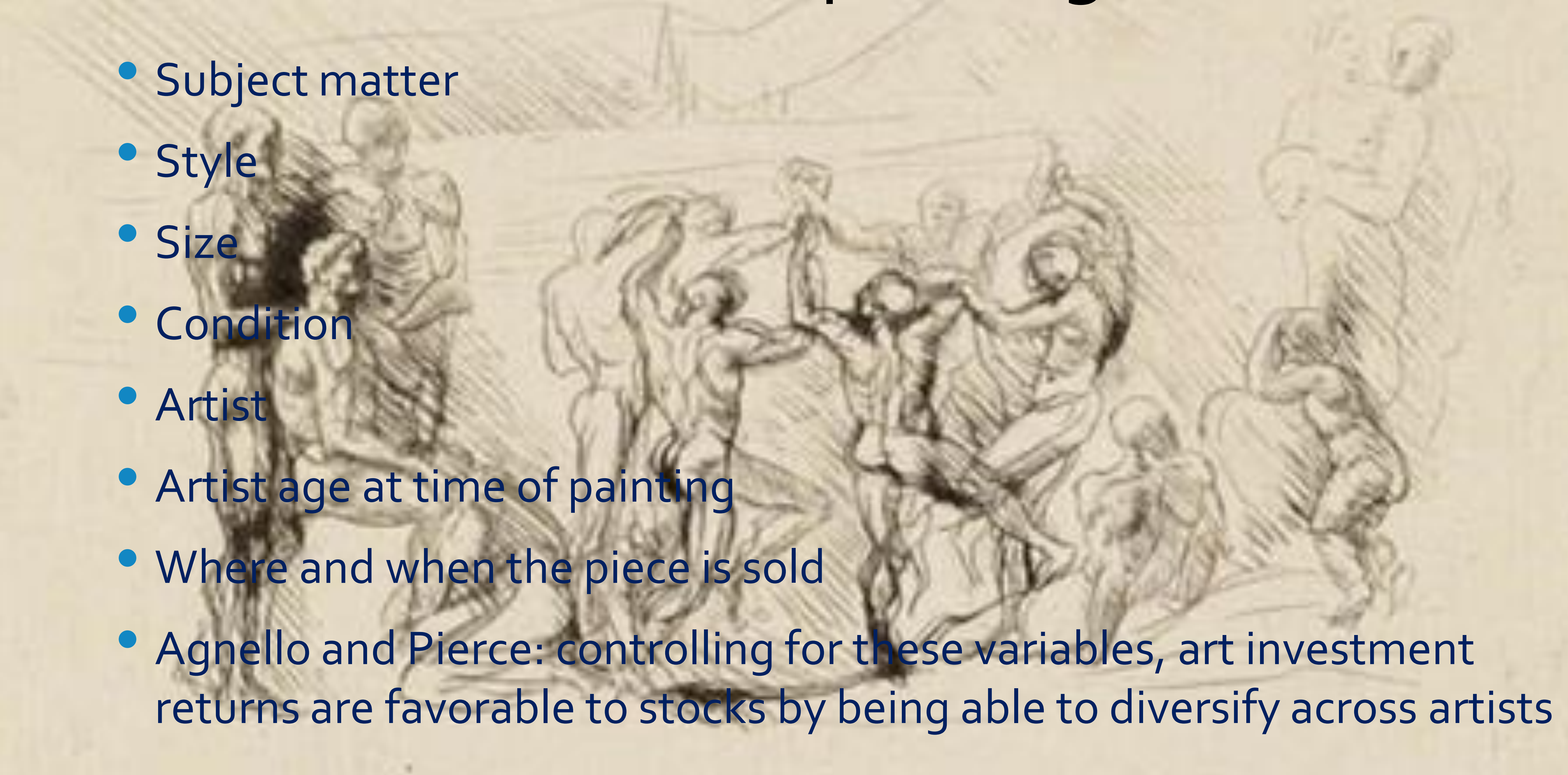


Figure 1. Repeat-Sale and Hedonic Indices for Impressionist Art

What determines a painting's value?

- Subject matter
- Style
- Size
- Condition
- Artist
- Artist age at time of painting
- Where and when the piece is sold
- Agnello and Pierce: controlling for these variables, art investment returns are favorable to stocks by being able to diversify across artists



La Ronde, Auguste Rodin, 1883-84

Why art has thrived but beanie babies busted

- Long history
- Fixed supply of masterworks
- Wider market
- The very rich buy art so it is conspicuous consumption

Baudlaire's Mistress Reclining, Edouard Manet, 1862

Conspicuous consumption

- Thorstein Veblen 1899
- Consumption that is unrelated to value of a good
- Satisfaction from showing off what I consume
  - Big house
  - Fancy car
  - Designer labels
- As the price of art goes up, so does satisfaction from owning it

Seated Man, Georges Seurat, 1883

American Gothic, Grant Wood, 1930

TABLE 1
Estimated Returns to Art from Various Studies

Author	Sample	Period	Method	Nominal return	Real return
Anderson (1974)	paintings in general	1780–1960	hedonic	3.3%	2.6%*
	paintings in general	1780–1970	repeat sales	3.7%	3.0%*
Stein (1977)	paintings in general	1946–68	assumes random sampling	10.5%	
Baumol (1986)	paintings in general	1652–1961	repeat sales		0.6%
Frey and Pommerehne (1989)	paintings in general	1635–1949	repeat sales		1.4%
		1950–87	repeat sales		1.7%
Buelens and Ginsburgh (1993)	paintings in general	1700–1961	hedonic		0.9%
Pesando (1993)	modern prints	1977–91	repeat sales		1.5%
Goetzmann (1993)	paintings in general	1716–1986	repeat sales	3.2%	2.0%*
Barre et al. (1996)	great impressionist	1962–91	hedonic	12.0%	5%*
	other impressionist	1962–91	hedonic	8.0%	1%*
Chanel et al. (1996)	paintings in general	1855–1969	hedonic		4.9%
	paintings in general	1855–1969	repeat sales		5.0%
Goetzmann (1996)	paintings in general	1907–77	repeat sales		5.0%
Pesando and Shum (1996)	Picasso prints	1977–93	repeat sales	12.0%	1.4%
Czujack (1997)	Picasso paintings	1966–94	hedonic		8.3%
Mei and Moses (2001)	American, impressionist, and old masters	1875–2000	repeat sales		4.9%
Graeser (1993)	antique furniture	1967–86	neither**	7.0%	
Ross and Zondervan (1993)	Stradivari violins	1803–1986	hedonic		2.2%

Sky Above Clouds IV, Georgia O'Keeffe, 1965

TABLE 2—COMPARISON OF REAL RETURNS FOR ART AND FINANCIAL ASSETS

Period		Art percent	S&P 500 percent	Dow percent	Gov. bond percent	Corp. bond percent	T-Bill percent
1950–1999	Mean	8.2	8.9	9.1	1.9	2.2	1.3
	SD	*21.3*	*16.1*	*16.2*	*9.5*	*9.2*	*2.3*
1900–1999	Mean	5.2	6.7	7.4	1.4	2.0	1.1
	SD	*35.5*	*19.8*	*22.2*	*8.6*	*8.4*	*4.9*
1875–1999	Mean	4.9	6.6	7.4	2.0	2.9	1.8
	SD	*42.8*	*8.7*	*20.8*	*8.0*	*8.0*	*4.8*

Notes: Asset returns are the average annual return calculated over the sample period, with the standard deviation shown in italics below. Real returns are calculated by subtracting inflation (US CPI growth) from nominal returns. Art returns are based on repeat sales regression index methodology for the sample of paintings in Mei and Moses (2002). Financial returns are based on data from the Federal Reserve Board and Global Financial Data (5th edition).

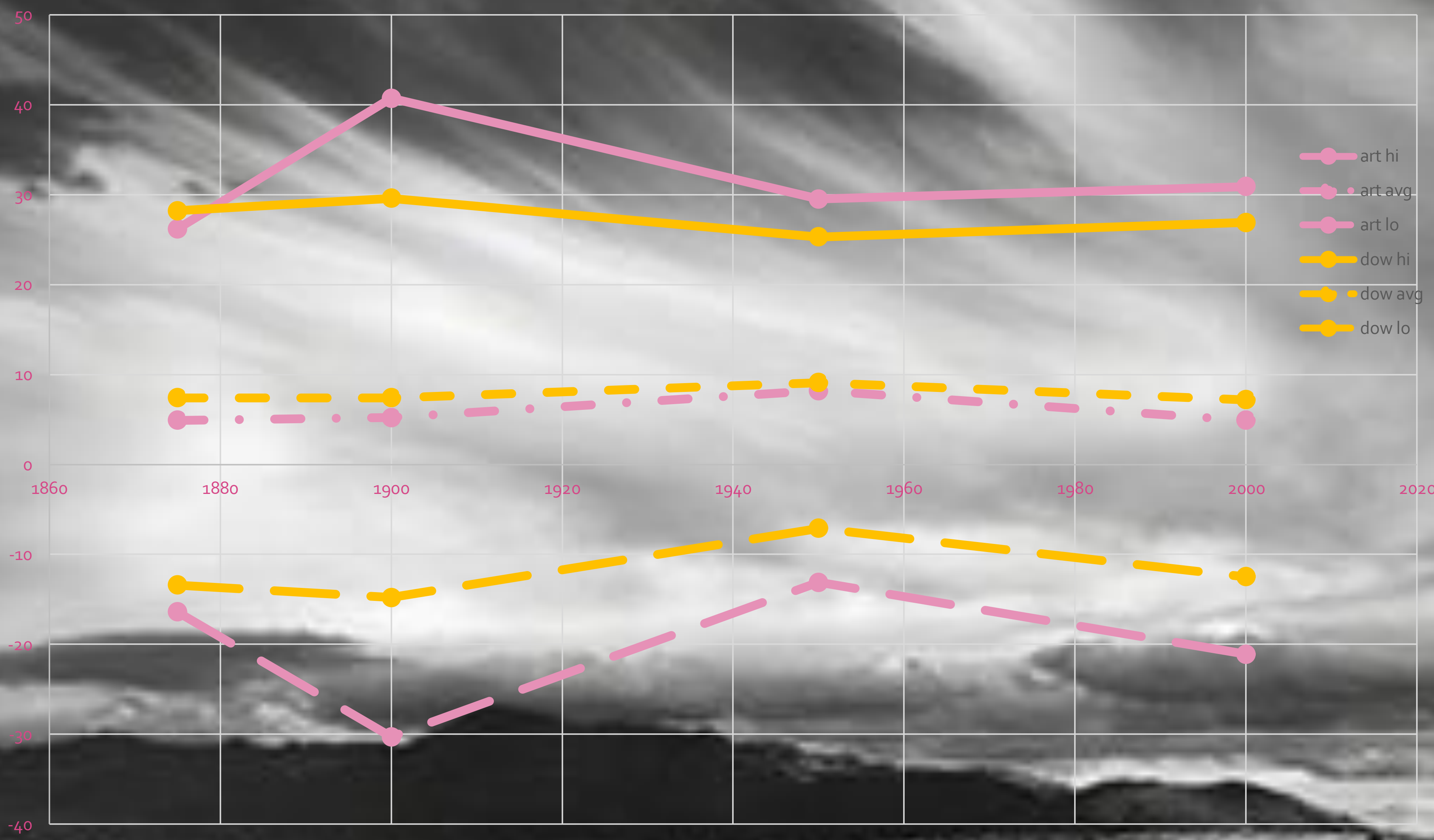
Source: Mei and Moses (2002, Table 1).

Risk and return

- Higher variance generally means higher return
- Standard deviation is square root of the variance
- “standard” way of knowing what is normal and what is extraordinarily small or large (more than one standard deviation from the mean)

Broadway Boogie Woogie, Piet Mondrian, 1942

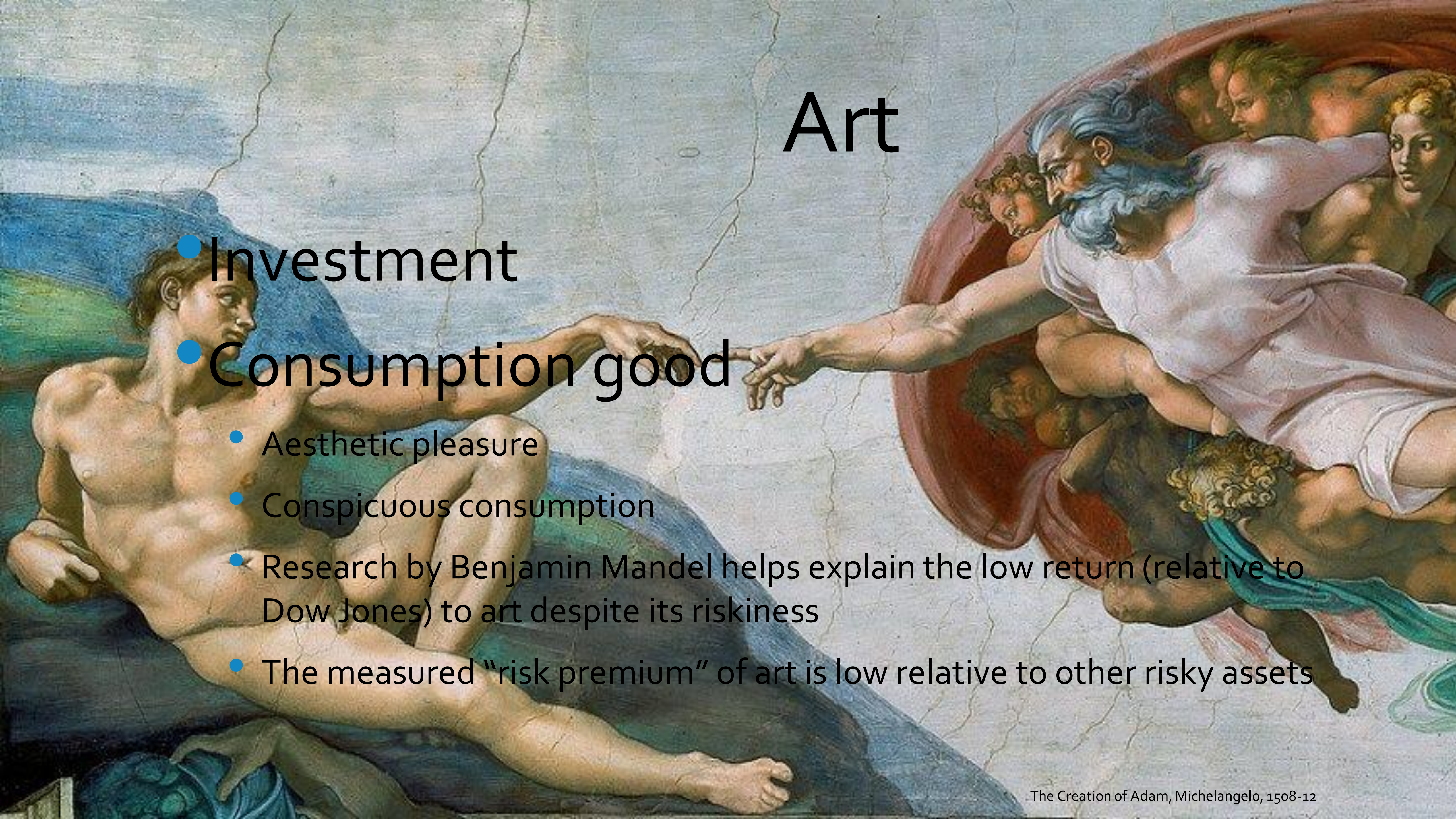
Risk and Return: Paintings v Dow Jones



Moon and Clouds, Ansel Adams, 1959

Art

- Investment
- Consumption good
  - Aesthetic pleasure
  - Conspicuous consumption
  - Research by Benjamin Mandel helps explain the low return (relative to Dow Jones) to art despite its riskiness
  - The measured “risk premium” of art is low relative to other risky assets



The Creation of Adam, Michelangelo, 1508-12

Investing in Art

- The Masterpiece Effect
- Art dealers advise that it is better to purchase one $100,000 work than ten $10,000 works
  - This should not hold
  - Efficient mkt should bid away such a return

The Ice is Good, Grandma Moses, 1961

The Masterpiece Effect

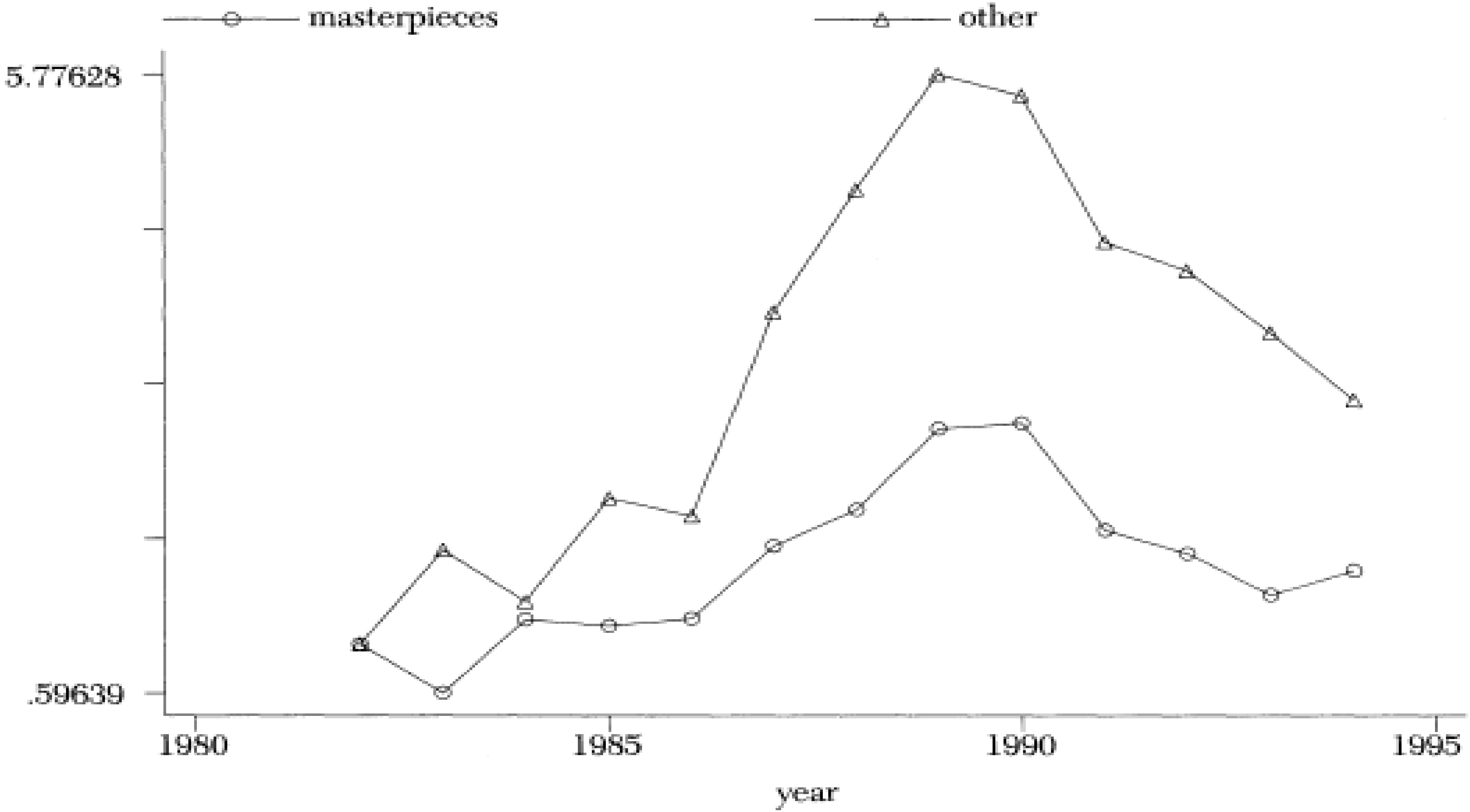
- Ashenfelter and Graddy study disputes this
- Masterpieces (defined as top 10% by price) do not outperform the rest. In fact they underperform
  - Steady across prints, American, impressionist, old master samples
  - Why would they underperform?
    - Overbidding due to fame of artist leads to reversion to mean on resale

At the Moulin Rouge, Toulouse Lautrec, 1892-95

TABLE 2
THE MASTERPIECE EFFECT

Author	Sample	Period	Result
Pesando (1993)	modern prints	1980–92	Return of 11% less for masterpieces
Ginsburgh and Jeanfils (1995)	impressionist, modern and contemporary European masters, other minor European painters, contemporary U.S. painters	1962–91	No effect
Goetzmann (1996)	paintings in general	1897–1987	No effect
Barre et al. (1996)	impressionist	1962–91	Great impressionists return 4% more than other impressionists
Mei and Moses (2001)	American, impressionist, and old masters	1875–2000	A 10% increase in price reduces returns by 1%
Ashenfelter and Graddy (see appendix)	impressionist art contemporary art	1980–91 1982–94	No effect Return of 50% less for masterpieces


Hunters in a Landscape, Anonymous, c.1575-95



Ashenfelter and Graddy

Figure 2. Contemporary Art

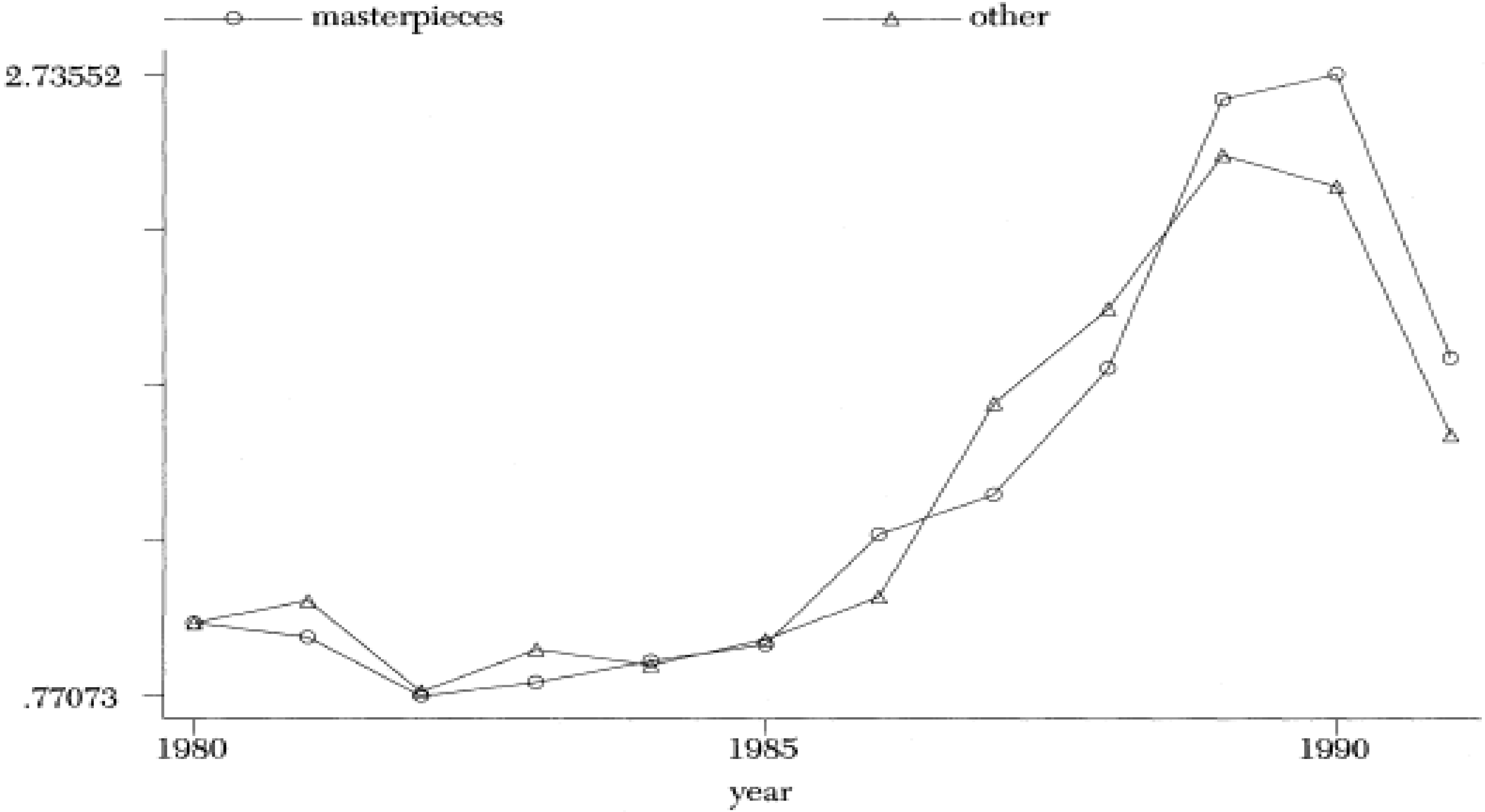
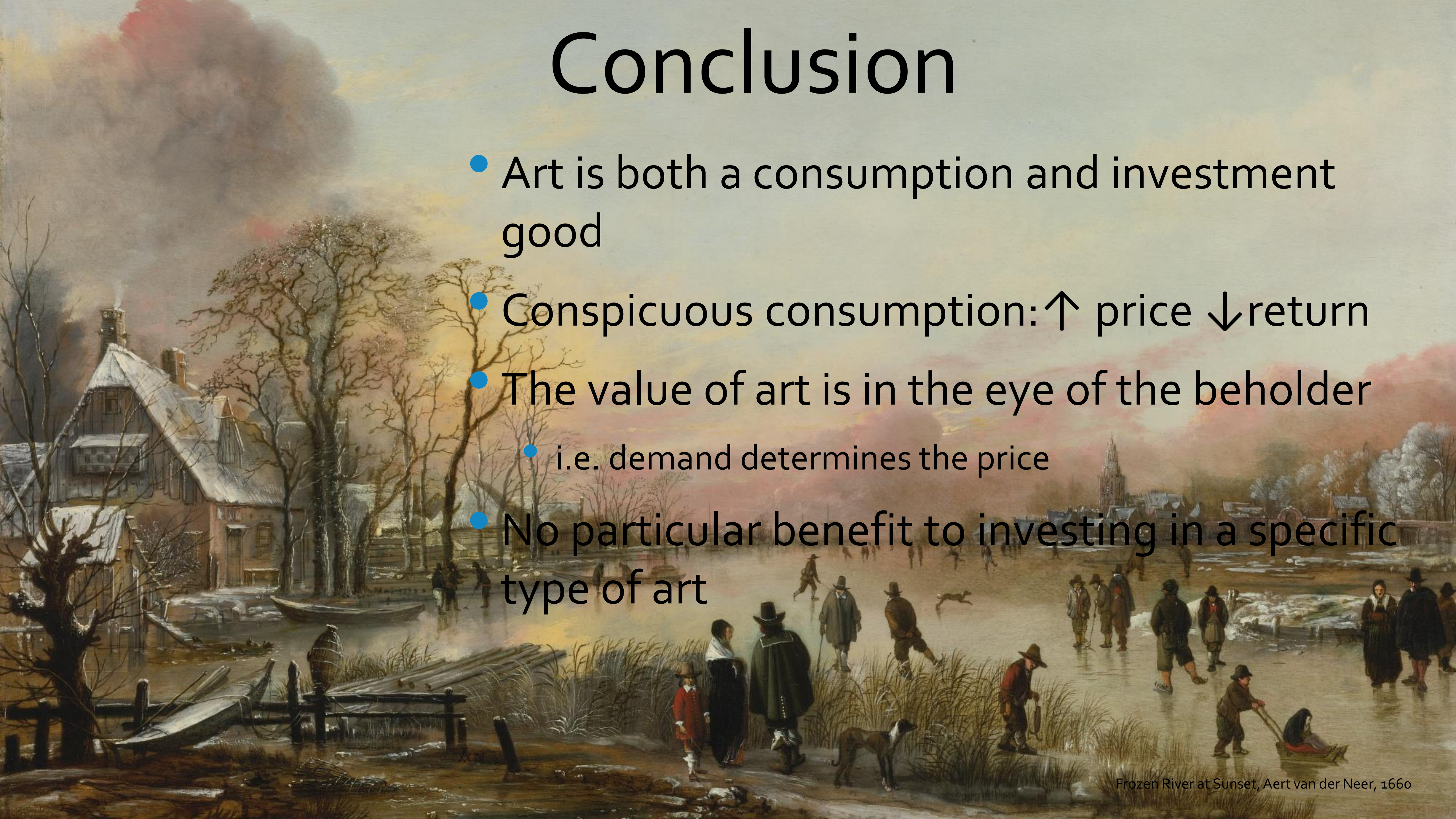


Figure 3. Impressionist Art

Ashenfelter and Graddy

Conclusion

- Art is both a consumption and investment good
- Conspicuous consumption: ↑ price ↓return
- The value of art is in the eye of the beholder
  - i.e. demand determines the price
- No particular benefit to investing in a specific type of art



Frozen River at Sunset, Aert van der Neer, 1660