

**THE SEEN AND THE UNSEEN *EN SCÈNE*:
VISUAL REPRESENTATIONS OF ECONOMICS**

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B.S. Mathematics-Economics
College of Arts and Sciences 2010

Submitted to the Undergraduate Faculty of
College of Arts and Sciences in partial fulfillment
of the requirements for the degree of
Bachelor of Philosophy

University of Pittsburgh

2010

UNIVERSITY OF PITTSBURGH

College of Arts and Sciences

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University of Pittsburgh, 2010

Recent developments in economic theories of voter behavior have questioned the assumption that voters are rational. This paper analyzes how visual representation—in media and in thought—can engender misconceptions about political economy and preclude remedies to these misconceptions. I review Michael Moore’s 1989 comedy-documentary *Roger and Me*, which treats layoffs at General Motors plants in Flint, Michigan, as well as “The Broken Window” from Frederic Bastiat’s essay “The Seen and the Unseen.” I argue linear narrative and the use of images as evidence undermine the consideration of the opportunity costs and widely-distributed effects of economic phenomena and thereby enhance the case for make-work.

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1.0 INTRODUCTION

“Television is dramatic. It appeals to the emotions. It captures your attention. However, the printed page is a more effective instrument for both education and persuasion. The authors of a book can explore issues deeply – without being limited by the ticking clock. The reader can stop and think, turn the pages back without being diverted by the emotional appeal of the scenes moving relentlessly across his television screen.”

- *Free to Choose* by Milton Friedman, Nobel laureate economist¹

“WE ARE TASKED WITH, IT SEEMS, CRAMMING A SHITLOAD OF **INFORMATION** INTO A LITTLE BIT OF TIME. OUR FRIENDS, THE PENGUINS, THINK THAT WE, THEREFORE, ARE EMPLOYED TO COMMUNICATE **INFORMATION** — AND, SO, AT TIMES, IT SEEMS TO US.

BUT NOTE: THE AUDIENCE WILL NOT TUNE IN TO WATCH INFORMATION. YOU WOULDN’T, I WOULDN’T. NO ONE WOULD OR WILL. THE AUDIENCE WILL ONLY TUNE IN AND STAY TUNED TO WATCH DRAMA.”

-memo from David Mamet, Pulitzer Prize-winning playwright and screenwriter, to the writing team of CBS series *The Unit*²

1.1.1 Public Opinion

Walter Lippmann, who founded *The New Republic*, revolutionized the study of how the citizenry thinks about public affairs with the book *Public Opinion* (1922). Lippmann says the arrival of modernity rendered naïve the traditional conception of deliberative democracy because, “now in

¹ Friedman, Milton. *Free to Choose*. New York: Harcourt, 1990. xv.

² Mamet, David. Mamet, David. “David Mamet’s Master Class Memo to the Writers of *The Unit*.” Seth Adromavitch. *MovieLine*. Available at: <http://www.movieline.com/2010/03/david-mamets-memo-to-the-writers-of-the-unit.php>

every society that is not completely self-contained in its interests and so small that everyone can know all about everything that happens, ideas deal with events that are out of sight and hard to grasp.”³

Small farmers living early in United States history might have relied on their personal experiences to decide where to build a road or whether to make war against a tribe. Modern voters, on the other hand, must substitute “pictures in our heads” for direct experience. Lippmann gives the following example:

Miss Sherwin of Gopher Prairie is aware there is a war waging in France and tries to conceive of it...but no one can conceive of three million men....so if she is to think about the war, she fastens upon Joffree and the Kaiser as if they were engaged in a personal duel.⁴

Unfortunately, particularly persuasive images sometimes diverge from reality. After viewing the film *Birth of a Nation*, a silent film that presents a glorified history of the Ku Klux Klan, Lippmann commented:

The shadowy idea becomes vivid; and your hazy notion of the Ku Klux Klan takes a vivid shape when you see *Birth of a Nation*. Historically it may be the wrong shape...but it is a shape, and I doubt whether anyone who has seen the film and does not know more about the Ku Klux Klan than Mr. Griffiths will ever hear the name again without seeing those white horsemen.”⁵

Lippmann realized early on that the rich, convincing meaning of visual experience can stray far from the patternless, amoral, and counterintuitive reality of the world beyond our heads. Today’s citizens live in a world with 24-hour news. Lippmann’s warning matters more than ever.

³ Lippmann, Walter. *Public Opinion*. New Brunswick, NJ: Transaction Publishers, 1991:14.

⁴ Lippmann 13.

⁵ Lippmann 92.

1.1.2 Scope and Thesis

The paper takes two assumptions as given: (1) citizens use mental images to deal with unfamiliar public questions; and (2) the media are powerful engines for planting mental images and endowing them with feelings. The paper does not assume that citizens *only* think visually or that *only* the media deposit the instrumental imagery. The visual element is only one force in a confluence acting on public opinion, but narrowing the focus of analysis to the visual element illuminates which way citizens might lean when all else cancels.

The task of this paper is to examine how visual media and visual thinking affect a citizen's consideration of specifically economic questions of public affairs. First, I summarize economic models of how citizens form public opinions. Second, I analyze the Michael Moore's 1989 comedy-documentary *Roger and Me*. Third, I analyze "The Broken Window" from Frederic Bastiat's essay "The Seen and the Unseen." I argue that linear narrative and the use of images as evidence undermine the consideration of opportunity cost and widely-distributed effects and thereby enhance the case for make-work.

2.0 MAKING DECISIONS ABOUT POLITICAL ECONOMY

2.1 RATIONAL IGNORANCE

In *An Economic Theory of Democracy*, the economist Anthony Downs posited a model that has come to be known as “rational ignorance,” which predicts very few citizens will bother to research political issues. The model makes two assumptions. First, an individual’s vote “is not decisive: it is lost in a sea of other votes.”⁶ In other words, it is very, very unlikely an election will come down to a single vote. Second, researching political issues is costly—not necessarily in monetary terms, but definitely in terms of leisure time and mental energy.

For example, deciding whether the Reagan tax cuts would pay for themselves—as supply-side advocates claimed—requires an American man living in 1983 to read articles and weigh competing claims. Reading and thinking about supply-side economics use up leisure time and energy, which the man could instead use to pick out a lawnmower. Since his vote *will not* affect whether the Reagan tax cuts actually take place, but his choice of lawnmower *will* affect whether his lawn looks good and whether he has to sacrifice time and money at the repair shop, the man rationally decides not to investigate supply-side economics. His decision will flow from a gut-feeling or irrelevant personal experience. Most voters will, like the man, rationally choose

⁶ Downs, Anthony. *An Economic Theory of Democracy*. New York: Harper & Row, 1957: 246.

ignorance, even on questions with right answers: economists regarded supply-side claims as false. It is important to note that rational ignorance does not depend on selfishness, since an individual's vote is irrelevant even if she desires the greater good.

Fortunately, democracy has a saving grace: some voters do research political questions. Therefore, democracy enjoys "the miracle of aggregation," which is said to occur when uninformed voters' errors to one side of the truth cancel errors on the other side. The decision will wind up with the small cadre of "informed" voters, who will select the "welfare-maximizing" policy.

For example: A curtain conceals either a red brick or a blue brick. Nine people vote independently to issue a collective prediction about the brick's color, and *one* of the nine knows the brick's color. Since eight people guess randomly, four should guess red and four blue.

A survey by Blinder and Krueger (2004) provides a real-world example of aggregation. The authors asked members of the public to estimate the federal budget deficit. They report, "The mean estimate of the federal budget deficit in our survey was surprisingly accurate...However, the variance across respondents was truly astounding—we received estimates of the federal budget deficit as low as \$1 billion and as high as \$5 trillion."⁷ The correct answer was \$311 billion, and the mean of the respondents was \$334 billion.

⁷ Blinder, Alan S. and Krueger, Alan B. "What Does the Public Know about Economic Policy, and How Does It Know It?" *Brookings Papers on Economic Activity*, Vol. 2004, No. 1 (2004), pp. 327-387. Brookings Institution. Available at: <http://www.jstor.org/stable/3217968>

2.2 CORRELATED ERRORS

Aggregation only neutralizes the danger of majority ignorance as long as uninformed voters' errors are truly random. However, some economists have started to formally question randomness. Romer (2003) posits the idea that misunderstandings coalesce to one side of an issue:

Irrationality is not needed for incomplete knowledge to give rise to welfare-reducing political outcomes. All that is required is imperfect information of a particular form: Individuals' errors must be correlated with one another.⁸

Romer notes correlated errors in people's understanding of the laws of physics. Many more people believe that heavier objects fall more quickly than lighter objects than believe that lighter objects fall more quickly than heavier objects. Even Aristotle, for example, believed heavier objects fall faster. If people tend to be wrong in the same ways about physical forces, then it is plausible that they tend to have universal, false ideas about economic forces.

2.2.1 Evidence of correlated errors

A 1994 study by the Kaiser Family Foundation and Harvard University School of Public Health asked American voters what they believed were the two largest items in the federal budget. The public's view of the budget was almost perfectly upside down. Voters counted foreign aid and welfare as the two most expensive items in the federal budget; they are actually the two smallest expenditures. Except for health care, voters counted defense spending and Social Security as the two cheapest items in the federal budget; they are actually the two most expensive.

⁸ Romer, David. 2003. "Misconceptions and Political Outcomes." *The Economic Journal*, 113 (January, 2003), 1-20: 2.

Table 2-1: Voter Estimates of Federal Expenditures⁹

Item	% Selecting Area as One of Two Largest Areas of Federal Spending	Actual Federal Budget Share (1993)
Foreign aid	41%	1.2%
Welfare	40%	10.2%
Interest on the federal debt	40%	14.1%
Defense	37%	20.7%
Social Security	14%	21.6%
Health	8%	10.9%

A 2001 study by the Program on International Policy Attitudes (PIPA) revisited this misconception:

PIPA asked respondents to estimate how much of the federal budget goes to foreign aid, and told them they could answer in terms of fractions of percentage points if they wished, to make them feel comfortable giving a low answer. Nonetheless, the median estimate was 20% of the budget—more than 20 times the actual amount (a bit less than 1%). The mean estimate was even higher, at 24%. Only 5% of respondents estimated an amount of 1% or less. This extreme misperception appeared in all demographic groups. Even among those with post graduate education the median estimate was 8%.¹⁰

Blinder and Krueger (2004) find a similar mirror reversal between reality and voter conceptions: “About 83 percent of tax filers pay more in payroll taxes than they do in income taxes. But our respondents thought the reverse was true, by a decisive margin of 52 percent to 35 percent.”¹¹

Slemrod (2003) analyzes data from a telephone survey about attitudes toward the existing U.S. tax system and the desirability of changing from the current tax system to a national retail sales tax or a flat-rate tax. Neil Boortz and several national legislators had recently popula-

⁹ Caplan, Bryan. *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*. Princeton, NJ: Princeton University Press, 2007: 80.

¹⁰ PIPA. “Americans on Foreign Aid and World Hunger: A Study of U.S. Public Attitudes.” February 2, 2001: 6. Available online: http://www.worldpublicopinion.org/pipa/pdf/feb01/ForeignAid_Feb01_rpt.pdf

¹¹ Blinder and Krueger 17.

rized the national retail sales tax via the FairTax proposal, which Mike Huckabee endorsed during his 2008 presidential campaign. Steve Forbes popularized the Flat Tax proposal throughout the 1990s. Slemrod reports:

41 percent say that high-income people would pay more under a flat-rate tax, 35 percent say less, and 18 percent say about the same amount. 41 percent say high-income people would pay more under a retail sales tax, 26 percent say less, and 23 percent say about the same amount. These beliefs run counter to what nearly all tax “experts” believe to be true.¹²

Slemrod explains this misconception might build on another misconception:

51 percent of all respondents think that middle-income families currently pay a higher percentage of income in taxes than high-income families...For these people, it is perfectly consistent to favor a flat-rate tax or a [retail sales tax] on the grounds of shifting the tax burden to the affluent if they believe either of the latter generates a proportional sharing of the tax burden.¹³

High-income households actually pay a proportionately greater share of their incomes in federal taxes than middle class households:

Table 2-2: Federal Tax Rate by Household Income Quintile, 2003¹⁴

Household Income Bracket	2003 Effective Federal Tax Rate (%)
Highest Quintile	25.5
Fourth Quintile	17.4
Third Quintile	13.8
Second Quintile	9.8
Lowest Quintile	4.6

¹² Slemrod, Joel. 2006. “The Role of Misconceptions in Support for Regressive Tax Reform.” *National Tax Journal* 59(1): 57–75. Available online: www.brookings.edu/comm/events/20031216_slemrod.pdf; 6.

¹³ Slemrod 6.

¹⁴ Congressional Budget Office. “Effective Federal Tax Rates for All Households, by Comprehensive Household Income Quintile, 1979-2006.” Available online: http://www.cbo.gov/publications/collections/tax/2009/effective_rates.pdf

2.3 RATIONAL IRRATIONALITY

Bryan Caplan, in *The Myth of the Rational Voter* (2007), offers an explanation why voters' errors coalesce into misconceptions. He posits a new model called "rational irrationality," in which "people tire of the search for truth, while rational irrationality says that people actively avoid the truth."¹⁵

According to Caplan, holding certain beliefs is more pleasant, so citizens hold these beliefs despite logic and evidence. This conclusion does not deny that individuals weigh costs and benefits, because an individual voter's beliefs do not impact economic policy and therefore do not bear on material well-being. Therefore, voters' beliefs are not random but rather skewed toward collective biases. Caplan posits four consistent biases:

(1) make-work bias: "a tendency to underestimate the economic benefits from conserving labor."

(2) anti-foreign bias: "a tendency to underestimate the economic benefits of interaction with foreigners."

(3) pessimistic bias: "a tendency to overestimate the severity of economic problems and underestimate the (recent) past, present and future performance of the economy"

(4) anti-market bias: "a tendency to underestimate the benefits of the market mechanism."¹⁶

Rational irrationality explains the foreign aid misconception. If you believe foreign aid is useless, then holding the belief "foreign aid is expensive" makes it comfortable to demand lower taxes or more spending elsewhere in the budget: the government can afford anything by cutting foreign aid. Conversely, it is sobering to recognize tax cuts require cutting benefits to the elderly.

Rational irrationality is not a good explanation for other misconceptions. Many voters support renewable energy mandates and subsidies but oppose a cap-and-trade system. Econo-

¹⁵ Caplan 123.

¹⁶ arranged and quoted from the article "The Myth of the Rational Voter" on Wikipedia

mists, on the other hand, regard command-and-control solutions as second-best. Why would a voter who is capable of understanding the issue feel comfortable supporting command-and-control? Costs are higher for producers *and* consumers under command-and-control. An explanation for certain biases must look beyond beliefs that are comfortable to beliefs that are intuitive the way it is intuitive for a heavy object to fall more quickly.

3.0 VISUAL MEDIA: *ROGER AND ME*

Michael Moore is the most successful documentary filmmaker ever. His films occupy places 1, 4, 6, 8, and 16 in the list of highest-grossing documentary films, earning a total of \$186 million in theaters. In 2005, *Time* included Moore in “Time 100” list of the world’s 100 most influential people. With *Bowling for Columbine*, Moore won the 2002 Academy Award for Best Documentary Feature. The clearest mark of success, however, is the number of movies dedicated to discrediting him: *Shooting Michael Moore*, *FarenHYPE 9/11*, *Michael Moore Hates America*, and *Celsius 411*. Moore’s success matters for an examination of how the media represents economic ideas, because *Capitalism: A Love Story*, *Sicko*, and *Roger and Me* all deal explicitly with economic issues—banking, health care, and outsourcing, respectively—and illustrate the pitfalls that normal visual representations open for considering economic ideas.

3.1 SYNOPSIS

Roger and Me (1989), Moore’s debut film, struck a powerful chord with audiences and critics, grossing \$6.7 million at the box office and prompting Roger Ebert to give it four stars and say, “The genius of “Roger & Me” is that it understands the image-manipulating machinery of corporate public relations and fights back with the same cynicism and cleverness. The wonder is

that the movie is both so angry, and so funny.”¹⁷ *Roger and Me* depicts a devastated Flint, Michigan, in the wake of layoffs at General Motors factories.

Moore narrates and appears on camera throughout the film, which begins with an autobiography and family history. His grandparents, aunts, uncles, and cousins worked for General Motors in factory jobs that afforded a stable, middle-class lifestyle. Moore publishes *The Michigan Voice*, a muckraking newspaper, until he leaves to edit *Mother Jones* magazine in San Francisco. San Francisco is too effeminate, though, because they have too many different types of coffee, and because the management wants to run a cover story about the risks of herbal teas over Moore’s plan to feature an autoworker. Moore’s return to Flint coincides with the first act’s catastrophic turning point: General Motors closes eleven factories and lays off 30,000 autoworkers in Flint as it opens factories in Mexico, where it hires workers for “70 cents an hour.” The camera’s eye spends the remaining screen time weaving between three narrative strands:

The first strand is graphic footage of how unemployment unravels Flint’s society. Moore follows a deputy through several evictions, including one on Christmas Eve. Abandoned houses pollute the landscape. Crime rises. *Money* magazine ranks Flint the worst place to live in America.

The second strand is Flint’s doomed attempts to reverse its fortunes. The city opens an auto-centered theme park and a downtown “festival market” center. The mayor hires a televangelist to hold a revival. Wealthy people keep insisting that there are more opportunities than ever before, if only the laid-off workers would work. Ronald Reagan advertises plentiful job opportunities in Texas. A mentally-disturbed woman, who previously depended on her now-

¹⁷ “Ebert, Roger. “Roger and Me.” Dog Eat Dog Films. Available online: <http://www.dogeatdog.michaelmoore.com/ebert.html>

unemployed brother, tries to support herself by selling pet rabbits; she fails and slaughters the rabbits to sell for stew and fritters, in a natural parody of the community's doomed renewal.

The third strand is Moore's personal quest to talk to Roger Smith, CEO of General Motors. He follows Smith to yacht clubs, athletic clubs, shareholder conferences, a Christmas party, and GM's corporate headquarters, but never gets an interview. Moore has to settle for debating the ethicality of the plant closings with a GM lobbyist.

3.2 STRATEGY

Roger and Me is a visual essay, which, like a textual essay, builds an argument upon supporting evidence. Because the film critiques outsourcing, its argument might be confused with Caplan's "anti-foreign bias," but the film only twice mentions the factories in Mexico. The argument, rather, is wider-reaching: it was wrong to close plants in Flint, *regardless of the motivation*, because General Motors was earning record profits at the time. As the synopsis of *Roger and Me* from Moore's website asks, "Since 1983, cars sales have steadily risen and GM has posted record profits of nearly \$19 billion. So why lay off all of these people?"¹⁸

Since the argument condemns plant closings for any reason whatsoever, then the argument is really an example of the "make-work bias." To understand how the visual element affects the argument, it helps to parse out the film's argument into concerns about fairness and human welfare.

¹⁸ "Roger and Me Synopsis." Dog Eat Dog Films. Available at: <http://www.dogeatdogfilms.com/synopsis.html>

3.2.1 Fairness

How do people think about the fairness of economic changes? Kahneman, Knetsch and Thaler (1984) find that people judge the fairness of changes in wages, prices, rents, and profits according to degree of deviation from a *reference transaction*, which is precedent set by past transactions for which fairness was not questioned. The reference transaction encapsulates a *dual entitlement* principle:

Transactors have an entitlement to the terms of the reference transaction and firms are entitled to their reference profit. A firm is not allowed to increase its profits by arbitrarily violating the entitlement of its transactors to the reference price, rent or wage. When the reference profit of a firm is threatened, however, it may set new terms that protect its profit at transactors' expense.¹⁹

The authors use reference transactions to explain why groceries stores put so many products “on sale” so often. A grocery store synthesizes a reference transaction by setting “normal” prices above the market-clearing price and then offering the market-clearing price as a “sale price.” Later, if a higher price becomes profit-maximizing—i.e. if costs rise, competitors fail, or tastes realign—the grocery store can end the discount without backlash, because the new, higher price does not exceed the synthetic reference transaction.

One of the survey questions is analogous to *Roger and Me*: Mr. Green employs two workers for \$7/hour, but he learns that equally competent workers will work for \$6/hour. The prompt asks, “what is fair for Mr. for Mr. Green to do in this situation?” It turns out that the profitability of Mr. Green’s business matters: “Replacing the employees or bargaining with them to achieve a lower wage was mentioned as fair by 67 percent of respondents when business was

¹⁹ Kahneman, Knetsch and Thaler., 1984. “Fairness as a Constraint on Profit on Profit Seeking Entitlements in the Market.” *Choices, Values, and Frames*. Ed. Kahneman and Tversky. Cambridge: Cambridge University Press, 2000: 319.

said to be poor, but only 25 percent of respondents when business was good.”²⁰ Moore’s narration supports this mode of judging fairness:

I mean, maybe I got this wrong, but I thought companies lay off people when they’ve hit hard times. GM was the richest country in the world, and it was closing factories when it was making billions.

Therefore, to explain the public’s guilty verdict in the case of Flint vs. General Motors, recourse to ideas about visual representation is superfluous. People believe it is wrong for a company or a person to fire workers and rehire cheaper workers if the company is viable. A funny, fast-paced movie like *Roger and Me* can raise public awareness of a particular case, but evidence suggests the public almost unanimously agrees with the underlying logic of the film’s argument.

The exception is to consider the role a film plays in choosing the reference transaction. In this view, Moore’s history of Flint is instrumental in establishing a reference transaction whereby General Motors pays its autoworkers generously. A movie exonerating General Motors might focus on the wages of unskilled laborers in other parts of the United States—non-union autoworkers in Alabama, for example—and thereby establish a reference transaction with lower wages. The layoffs would then seem somewhat closer to ending a bonus—just like ending a discount at the grocery store.

²⁰ Kahneman, Knetsch, and Thaler 324.

3.2.2 Welfare

Human welfare is another metric to evaluate economic changes. Formal welfare economics is intricate and controversial, but it is safe to say that very abstract ideas about costs and benefits bear on whether a change is perceived as “good or bad.”

The welfare argument of *Roger and Me* can be phrased several ways: closing the plants was welfare-reducing; closing the plants caused more bad than good; the losses of the losers of the plant closings outweighed the gains of the winners. In other words, *Roger and Me* is not just about how General Motors deviated from an unspoken “reference transaction”; it is about ruined lives. The image of a family evicted on Christmas Eve does not speak to fairness, really—most Americans would say it is fair for a landlord to turn out delinquent tenants—but it measures the depth of Flint’s misery.

Weighing costs and benefits as well as fairness is not really a capitulation to worldly concerns, because fairness judgments are so prone to framing that they are impossible not to compromise. In the study noted above, Kahneman et. al posed two scenarios to different sample groups and asked respondents to rate the companies’ actions as “acceptable” or “unfair”:

Question 4A. A company is making a small profit. It is located in a community experiencing a recession with substantial unemployment **but no inflation**. There are many workers anxious to work at the company. The company decides to **decrease wages and salaries 7 percent** this year.

Acceptable 38% Unfair 62%

Question 4B. A company is making a small profit. It is located in a community experiencing a recession with substantial unemployment **and inflation of 12 percent**. There are many workers anxious to work at the company. The company decides to **increase salaries only 5 percent** this year.

Acceptable 78% Unfair 22% ²¹

²¹ Kahneman, Knetsch, and Thaler 322.

The workers' real income falls by the same amount in both cases, but people reverse their judgments. A similar discrepancy emerged when the survey compared a wage cut and a suspended "annual bonus" of the same amount. A similar analogy is the way that people get angry if someone rides an elevator to the first floor, instead of walking up one flight, but no one gets mad if someone presses a button for the 3rd floor when the 4th floor button is already pushed. In other words, framing empties out the idea of fairness so much that fairness is impossible not to compromise. Instead of only looking at fairness, then, it is better to consider fairness alongside welfare.

Using images to declare and compare costs and benefits presents a problem: imagery overweights an event's concentrated gains and losses relative to its dispersed gains and losses. In *Roger and Me*, losses are concentrated on a few people while gains are dispersed over many people, and losses are concentrated in time and space while gains are dispersed across space and time.

Losses that fall on only a few losers are dramatic. The situation of the woman with the rabbits was so dramatic that Moore featured her in a 23-minute sequel, *Pets or Meat: The Return to Flint* (1992). The gain to any individual winner, on the other hand, is not dramatic because it is a change *at the margin*. It is impossible to see how a marginal gain—a slightly cheaper car or a slightly higher dividend—helps any individual winner. If a winner's income rises by one dollar, for example, then she really can buy one more dollar of goods and services, but it is unclear *which* purchase the dollar enables. In addition, the perceived "goodness" an extra dollar renders is *close to* negligible; it is the "goodness" of a King Size Hershey bar. Therefore, each winner's personal gain amounts to zero; and zero times many millions equals zero. Dispersal dilutes gains or losses into nothingness.

Nobel Laureate Friedrich Hayek makes a similar point about marginal changes:

So long as we can freely dispose over our income and all our possessions, economic loss will always deprive us only of what we regard as the least important of the desires we were able to satisfy....And similarly with an economic gain.²²

It is easy to depict effects concentrated in a single place and time as the consequences of a single event. The car-window panoramas of bombed-out Flint housing would not be possible to film if the outsourcing event scattered losses across the country as it does the gains. For example, it would be hard to make a compelling movie—*William Shatner and Me*—about how Price-line.com shuttered travel agencies nationwide, such as STA here in Oakland. (This imbalance is not always misrepresentation, though: a concentrated layoff sinks house prices just when homeowners need to move, while a dispersed layoff lets unemployed people sell their homes at normal prices or find new jobs in the same area.)

The strongest evidence concentration matters is that Michael Moore compressed time and place in *Roger and Me*. As the *New York Times* review of *Roger and Me* noted:

The film compressed events that actually took place over a long period of time and altered the sequence of some of them. The 11 plant closings affected 4 states, not just Flint. The 30,000 jobs lost in Flint were lost over 12 years, not the far shorter span suggested - though never explicitly stated - by Mr. Moore in *Roger and Me*.²³

Michael Moore responded with the following:

What would you rather have me do? Should I have maybe begun the movie with a Roger Smith or GM announcement of 1979 or 1980 for the first round of layoffs that devastated the town, which then led to starting these projects, after which maybe things pick up a little bit in the mid 80's, and then boom in '86, there's

²² Hayek, Friedrich August von. *The Road to Serfdom: Text and Documents, the Definitive Edition*. Ed. Bruce Caldwell. Chicago: University of Chicago Press, 2007. 126

²³ Bernstein, Richard. "Roger and Me: Documentary? Satire? Or Both?" *New York Times*. Feb. 1, 1990. Available from: <http://www.nytimes.com/1990/02/01/movies/roger-and-me-documentary-satire-or-both.html>

another announcement, and then tell that whole story?....Then it's a three hour movie. It's a movie, you know; you can't do everything.²⁴

3.2.3 Truth

I roughly sketched these ideas at a presentation in summer 2009. Someone asked, “What if Michael Moore is just *right*? What if these conventions actually represent reality?” There are two answers:

The first answer is that orthodox economics can claim some high-ground in weighing social costs and benefits, because its theorems can test new claims against uncontroversial conceptions of welfare. For example, suppose two counties compete for highway funding. Each side claims its plan would “do the most good,” and—because each county’s representatives have a very specific picture of how the money would benefit their own county but only a vague picture of the competitor’s plan—both sides can argue in good faith. A transportation economist can prevent a shouting match by inputting estimates of traffic volume, time saved, value of time, and land-price changes into a model to determine the “best” use of the money. This process doesn’t demand Platonic form of “good highway spending,” but the model might have been used in the past to reach conclusions agreeable to both counties or it might extrapolate logically from intuitive assumptions.

A second answer—one with more room for skepticism about trade and progress—is that for a medium to be a useful pipeline between reality and our mental picture of reality, the medium’s practitioners must be able to answer either/or questions in two directions. The “occupied”

²⁴ Moore, Michael qtd. in Chapman, Jane. *Documentary in Practice: Filmmakers and Production Choices*. Maden, MA: Polity Press, 2007.

sign on a restroom is only useful because it can also say “open,” and a medium is only useful if it can say one thing *or* its negation. This has nothing to do with the agenda of the medium’s practitioners: Game Theory has spawned a whole literature proving that decision-makers derive useful information from biased senders.

It is harder to base rational decisions on signals from a sender whose signal space is limited. Thus, even if orthodox economics is wrong about outsourcing, then a movie confined by narrative strictures cannot tell us orthodox economics is wrong—just as, even if it really is twelve o’clock, the blinking 12:00 on the microwave does not tell us so.

4.0 VISUAL THINKING: “THE SEEN AND THE UNSEEN”

One of the first evangelists of economic orthodoxy was Frederic Bastiat, a French farmer and politician who lived from 1801 to 1850. Bastiat is best remembered for his essay "The Seen and the Unseen," in which he advocates looking at both seen and unseen consequences of economic phenomena. Bastiat wrote before the invention of photography, so visual media are not necessary to explain his opponents' "economic sophisms." The mind's eye causes enough trouble. But explicitly visual representation can widen the gap between seen and unseen. Unseen factors include opportunity costs and foregone opportunities, so visual representations will discount opportunity costs and foregone opportunities relative to the gains and losses that actually take place. In order to extrapolate how visual media hamper Bastiat's original arguments, the paper includes Bastiat's original passages.

4.1 THE BROKEN WINDOW

"The Broken Window" is Bastiat's first example and the most famous. The lesson of the story is now called "The Broken Window Fallacy," a term that boasts its own Wikipedia article and formed the basis for Henry Hazlitt's *Economics In One Lesson*.

Have you ever been witness to the fury of that solid citizen, James Goodfellow, when his incorrigible son has happened to break a pane of glass?

If you have been present at this spectacle, certainly you must also have observed that the onlookers, even if there are as many as thirty of them, seem with one accord to offer the unfortunate owner the selfsame consolation: “It’s an ill wind that blows nobody some good. Such accidents keep industry going. Everybody has to make a living. What would become of the glaziers if no one ever broke a window?”

Suppose that it will cost six francs to repair the damage. If you mean that the accident gives six francs’ worth of encouragement to the aforesaid industry, I agree. I do not contest it in any way; your reasoning is correct. The glazier will come, do his job, receive six francs, congratulate himself, and bless in his heart the careless child. *That is what is seen.*

But if, by way of deduction, you conclude, as happens only too often, that it is good to break windows, that it helps to circulate money, that it results in encouraging industry in general, I am obliged to cry out: That will never do! Your theory stops at *what is seen*. It does not take account of *what is not seen*.

It is not seen that, since our citizen has spent six francs for one thing, he will not be able to spend them for another. *It is not seen* that if he had not had a windowpane to replace, he would have replaced, for example, his worn-out shoes or added another book to his library. In brief, he would have put his six francs to some use or other for which he will not now have them.²⁵

If the incorrigible son had not broken Goodfellow’s window, then the cobbler or the book binder would earn the glazier’s income. Nothing in the story suggests the glazier is needier than the cobbler or book binder—the difference between the two is, literally, immaterial—so suspending the event does not disturb fairness or welfare. The drawback is that Goodfellow cannot enjoy both the window *and* his purchase. Bastiat concludes: “Society loses the value of objects unnecessarily destroyed.”

²⁵ Bastiat, Frederic. *Selected Essays on Political Economy*. Trans. and Ed. Seymour Cain. Irvington-on-Hudson, NY: The Foundation for Economic Education, Inc., 1995. Accessed Online at *Library of Economics and Liberty*. <http://www.econlib.org/library/Bastiat/basEss1.html>

4.2 AVAILABILITY

Cognitive psychologists, lead by Nobel Laureate Daniel Kahneman and Amos Tversky, have discovered ways people base judgments not on reason and probability but on *heuristics*, which are mental shortcuts for information processing. Applying these heuristics to the cognitive missteps alleged in “The Broken Window” illustrates ways visual thinking can deceive and carries implications for visual media, which can exacerbate wrong tendencies.

A decision-maker uses the *availability heuristic* whenever she assesses “the frequency of a class or the probability of an event by the ease with which instances or occurrences can be brought to mind.”²⁶ For example, Tversky and Kahneman (1972) ask subjects to estimate whether there are more words that start with K or where K is in the third position with the hypothesis that, since it is easier to think of words that start with K, people will (wrongly) judge these words to be more frequent. In fact, subjects judged the first position most frequent not only for K, but for the four other consonants (L, N, R, V) that appear more often in the third position.²⁷

Availability depends on *salience*—the degree to which memorable instances are more easily retrieved; and salience can depend on dramatic images. News reports about shark attacks and movies like *Roger and Me*, which aim to “raise awareness of an issue,” make instances more retrievable by tagging them with especially salient images.

Availability also depends on *imaginability*, which is the ease of constructing a mental image of an instance. For example, most people fear sharks more than hippopotamuses, even

²⁶ Tversky, Amos and Kahneman, Daniel. 1982. “Judgment under uncertainty: Heuristics and biases.” *Judgment under Uncertainty: Heuristics and Biases*. Ed. Kahneman, Tversky, and Slovic. New York: Cambridge University Press, 1982: 11

²⁷ Tversky, Amos and Kahneman, Daniel. 1972. “Availability: A heuristic for judging frequency and probability.” *Heuristics and Biases: The Psychology of Intuitive Judgment*. Ed. Gilovich, Griffin, and Kahneman. New York: Cambridge University Press, 2002.

though hippos kill more people, because a shark will obviously bite with its teeth, while it is unclear exactly how a lumpy, lumbering hippopotamus kills. An exception was T.S. Eliot, who imagined carnivorous hippos:

The hippopotamus's day
Is passed in sleep; at night he hunts;²⁸

Availability explains the Broken Window Fallacy in two ways: First, an individual might associate positive outcomes with images of work being done or money changing hands without regard to human satisfaction.²⁹ The “enjoyment” James Goodfellow derives from his belongings is not easily imagined—especially in the case of the window, which is not only transparent, but which also renders its service best when it sits immobile. Therefore, an individual can retrieve several instances imbued with positive affect in the case of the broken window but none in the case when the window is not broken. Part of Bastiat’s rhetorical strategy is to remind us that the window, the shoes or the book exist to render enjoyment.

Second, the bystander’s theory implicitly worries that, without a broken window, then James Goodfellow would not spend the six francs. Why? No one assumes a given stranger is a miser, so it is worth asking why the event chronology makes it seem likely the money will go unspent. After all, a typical person wants money to buy or lend. Once it has been posited that six francs is spent fixing a broken window, though, the bystander’s assessment of the counterfactual diverges radically from the prior probability:

$P(\text{“six francs is spent”} \mid \sim\text{“six francs is spent fixing a broken window”}) \ll P(\text{“six francs is spent”})$

²⁸ Eliot, T.S. “The Hippopotamus.” *Poems*. New York: Alfred A. Knopf, 1920.

²⁹ I ignore the possibility that the economy is in a recession and interest rates are near zero, in which case increasing the velocity of money from the broken window spending might revive the economy. It is unlikely people make these assumptions. The point the story is to discourage something that is false 99 percent of the time.

According to Support Theory, first posited in Tversky and Koehler (1994), when an individual estimates $P(\text{"six francs is spent"} \mid \text{"six francs is not spent fixing a broken window"})$ against the null $P(\sim\text{"six francs is spent"} \mid \sim\text{"six francs is spent fixing a broken window"})$, she retrieves an instance—money changing hands, men busy at work, a glazier sitting around doing nothing—and judges how much the instance supports the statement or its null based on the *strength* of the instance; she ignores prior probabilities. Strength depends on salience, imaginability, stereotypes, affect, a previous suggestion and other factors that are not reliable stand-ins for probability. Therefore, the absence of an image for Goodfellow’s preferred expenditure undercuts the estimated likelihood that Goodfellow’s preferred expenditure would take place under any circumstances. But the story’s chronology leaves the image of an idle glazier fresh in the mind’s eye and therefore supports the strange suggestion that Goodfellow was going to hoard the money. The result is:

$$P(\text{"six francs is spent"} \mid \sim\text{"six francs is spent fixing a broken window"}) < P(\sim\text{"six francs is spent"} \mid \sim\text{"six francs is spent fixing a broken window"})$$

4.3 UNPACKING THE THIRD MAN

Movies are not responsible for this faulty thinking, but the visual element of movies precludes Bastiat’s retort, which relies on *unpacking*. A conclusion of Support Theory is that *unpacking* a statement—phrasing it as a logically-equivalent chain of explicit descriptions, or “disjunctions”—can increase its perceived probability. For example, Johnson, Hershey, Meszaros, and Kunreuther (1993) found that people contemplating \$100,000 life insurance policies for an airplane flight were willing to pay \$24.43 for insurance against death due to terrorism or mechanical failure but only \$12.03 for insurance against death due to “any reason.” Unpacking is Bas-

tiat's rhetorical strategy when he writes, "*It is not seen* that if he had not had a windowpane to replace, he would have replaced, for example, his worn-out shoes or added another book to his library." Bastiat's argument is effective enough to become famous, so apparently people perceive something along the lines of:

$P(\text{"six francs is spent on a book"} \vee \text{"six francs is spent on shoes"} \vee \text{"six francs is spent on anything besides shoes or a book"} \mid \sim \text{"six francs spent fixing a broken window"}) > P(\sim \text{"six francs is spent"} \mid \sim \text{"six francs is spent fixing a broken window"})$

Fundamentally, the Broken Window Fallacy amounts to ignoring *opportunity cost*. The opportunity cost of something is what must be given up to have it. Bastiat's unpacking strategy simply mentions possible opportunity costs.

A director working with moving pictures has a harder time refuting these intuitions than Bastiat does with print. Mentioning the opportunity cost means weighing a counterfactual, which Bastiat calls "a negative fact," against a palpable fact. It is rare for fiction films to use counterfactuals. *It's a Wonderful Life*, *Run Lola Run* and *Sliding Doors* depict counterfactuals, but in each case the counterfactual is not merely a useful plot device but rather the essential gimmick of the film. More importantly, it is nearly impossible for a non-fiction film to weigh counterfactuals in the same way it weighs true events. Consider Bastiat's passage:

The reader must apply himself to observe that there are not only two people, but three, in the little drama that I have presented. The one, James Goodfellow, represents the consumer, reduced by destruction to one enjoyment instead of two. The other, under the figure of the glazier, shows us the producer whose industry the accident encourages. The third is the shoemaker (or any other manufacturer) whose industry is correspondingly discouraged by the same cause. It is this third person who is always in the shadow, and who, personifying *what is not seen*, is an essential element of the problem.

Even in an imaginary world, this third man is somehow "always in the shadow." He lives in the hypothetical's hypothetical. Still, it is easy for Bastiat to conjure the third man by writing a

handful of words. It much harder for a non-fiction film to make the third man the glazier's equal, because one of the classic conventions of filmmaking is "show, don't tell." Anything that happens can be filmed or recounted in an interview, so the director can interview the grateful glazier. But she cannot interview the shoemaker, because it is not clear he would receive the six francs. After all, Bastiat posits the third man is "the shoemaker (or any other manufacturer)," but the director can only interview a specific person. While documentary narration often plugs gaps and explains fine points, it is rare for a narrator to claim to know, for example, what a shopkeeper would have bought. The director is left to fixate on the money itself as a representative of the third man in the shadows, but to fixate on money as a substitute for the third man looks exactly like fixating on it as a thing in-itself, which is miserliness and will never weigh as much as the actual, specific third man.

5.0 NEW DIRECTIONS

Roger and Me and “The Broken Window” show that narrative and imagery can exacerbate shaky reasoning and preclude remedies for misconceptions. Evidence and analysis based on concepts of cognitive psychology support this conclusion. Identifying the problem, however, is a long way from identifying a solution.

Narrative and imagery are what make media interesting. There are many educational films and one-hour specials on TV that run a long way with alternatives to narrative and imagery, but none are as famous or popular as movies like *Roger and Me*. One solution might be to use narrative and imagery that are highly abstracted from real life. Instead of true stories, a piece could use hypothetical examples. Instead of actual images, a piece can use graphs, animations, and symbols. Multimedia suites such as Adobe Creative Suite can make symbols interesting. Although these tools are disconnected from reality, the messages they convey can represent the invisible forces and trends behind modern life. In the first place, the limits of a hypothetical example or a synthetic image like an animation are obvious; it is hard to confuse them with a broad reality. In the second place, the absolute control hypothetical examples and synthetic images offer allows practitioners to abstract away the compelling-but-confusing features of a real situation.

Evidence suggests that there is a new demand to understand economics authentically, and our understanding of economics suggests that supply meets demand. The recent financial crisis provoked a renaissance in presenting economics interestingly. Apparently there is a right way to

do it. The National Public Radio weekly program *This American Life* produced an episode about the mortgage crisis entitled “The Giant Pool of Money,” which became one of their most popular episodes to date and spawned four follow-up episodes on the economy and *Planet Money*, a podcast/multimedia blog dedicated to explaining the economy. *Crisis of Credit Visualized*, an animation based on “The Giant Pool of Money,” has earned three million views on Vimeo and YouTube. As the economy and government grow more complex, and society faces more difficult fiscal choices in coming years, we can only hope that our means of explanation will meet the challenge.

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