

Television Viewership and Divorce Rates

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Introduction:

Television has become such a big part of people's lives that many don't think of how much time they spend watching it. The most recent American Time Usage Survey indicated that watching TV is the most done leisure activity other than sleeping (Chonchaiya). The average number of hours a person watches is 2.77 hours a day (ATUS) and 97 percent of households in America own a television set (Nielsen). This number was at 99 percent in 2013 but has been decreasing because of Netflix and computers (Shepard).

Television was invented in the early 1900s but was made practical in the 1920s. The usage rates didn't really start to increase dramatically until the late 40s into the early 1950s (Baughman). When in 1952, 20 percent of all households owned a TV and by the beginning of the 1960s, 89 percent owned one (Nielsen). This huge increase was due to the fact that television sets were becoming cheaper and higher quality programming.

With this amount of people participating in an activity by using their leisure energy and time, television is bound to have some effects on a majority of the population. This includes both micro and macro results on things ranging from the entire culture to each and every individual.

At the very least, television is by far the most significant factor for influencing the purchasing habits of a vast majority of the American population. This is validated by the fact that advertisers spend around \$100 billion on television promotions, the most of any communication medium. (Peterson)

And at the very most, TV is the main revivalist who is responsible for the cultural paradigm and our entire perspective. “Both theory and intuition suggest that television plays an important role in the development of many facets of attitude, emotion, social behavior and intellectual functioning... Television is filled with dramas about human interaction, about family life, love, sexuality, emotion and problem solving. Surely viewers carry away some of these messages.”

(Huston) When people adopt different values and are introduced new ways of thinking it changes the trajectory of an individual's life. And when the trajectory of enough people's lives changes, social and civil indicators will reflect that change.

Since the consequences of television are so complex and enigmatic the objective for this paper is to raise awareness of the tacit effects, and not to convince anyone that TV is either good or bad. Stephen Dubner and Steven Levitt have discussed and taken part in some of the studies in this area. There were two separate research ventures that have discerned a causal relationship between both crime and TV and civil rights and television.

The research that found a link between increases in the crime rate and television was based off of data from our country and was administered by Steven Levitt and Matthew Gentzkow. They used roughly the same time periods as me, and they were able to observe a difference in crime rates by cities during the 1960s that were proportionately linked to television usage in the 1950s. They found that for every extra year a child was around television before they were fifteen, there was a 4 percent increase in the number of property-crime arrests and a 2 percent increase in violent crime arrests.

The research that found a positive causal relationship between television and civil rights was based off of information from India, and was done by Robert Jensen and Emily Oster. Their study essentially uses the fact that India didn't get cable until 2001, due to a lack of infrastructure and quality programming, to understand the relationship between cable and culture. What they found was the rural Indian families who got cable began to have a lower birthrate (usually indicates more autonomy for women), families were more likely to keep their daughters in school, and women were less likely to tolerate domestic abuse.

There are many contending theories as to the reasons for why television would increase the crime rate as well as the increase in civil rights, but their research makes it clear that the cause is television. Considering television has both good and bad effects, its impossible to definitively say that television is bad but it is also impossible to say if television is all good. So again the question isn't - is television good or bad? But rather - what are some tangible effects that television perpetuates? Many academic disciplines try to answer some of these questions but economics is the only discipline that unbiasedly seeks to mathematically describe the 'cause' measured by the 'effect'.

A Quick History of Television:

Currently all households in all American counties have about a 97 percent television ownership rate, since the late 1960s there hasn't been much geographical variations of television households. However, this was not the case when televisions were first introduced to the public in the 1920s. At first they

were very expensive and there was not much programming available. They slowly became more popular, and the 1950s is when TV really became popular. From 1950-1960 the percentage of homes with television jumped from about 25 percent to 90 percent.

The 1950s was a very dynamic time for America. Clashes between communism and capitalism dominated the decade and the War helped the U.S. experience huge economic growth. In addition to new homes being built there were inventions that would revolutionize the way that people lived their lives. This helped lead the way for a new paradigm of living, called consumerism. And by the end of the decade, prime time radio was replaced by television.

Take a second to think of the remarkable difference in communication abilities that television has over radio. Television cannot only auditorily portray messages, it also communicates them visually. If a picture is worth a thousand words then because there are 4220 (Brownlow) pictures displayed per minute on television, every minute of watching TV is worth 4,220,000 words. Psychologist Albert Mehrabian demonstrated that 55 percent of communication is done through body language or visually. If this is accurate, it allows companies to be 55 percent more effective when trying to communicate with anyone who owns a television. Therefore it dramatically increased the ability of advertisers, politicians, and content producers to be able to effectively communicate a message to the general population.

There were three main channels that were producing content in the 1950s: National Broadcast Company (NBC), American Broadcasting Company (ABC),

and Columbia Broadcasting System (CBS). All three broadcasters were in constant competition to produce the best content. (NBC.com) Through the fight for ratings, many genres of shows were developed. Soon afterwards situational comedies, variety shows, westerns, dramas, and soap operas were all being broadcasted over the radio waves.

An Overview of the Popular Shows in the 1950s:

The most popular shows that were introduced in the 1950s had a number of similarities that portrayed the family living a certain way. For example, in the first episode in each of the most popular family shows, started with a scene where the woman/wife was cooking for her husband and children. For most of these shows the father was dressed in a suit and had a high-end middle class job. The next five paragraphs have observations that came from dissecting the pilot episode for each show.

The Adventures of Ozzie and Harriet (1952-1966) was about the exemplary middle class family, with the dad working as an advertising manager and living in a three story house with a white picket fence. Hotpoint Appliances overtly sponsored the show. It gave a campy representation about the characteristics that being a sibling requires by showing the kids talking disparagingly, playing football and rough-housing. The relationship between Ozzie and Harriet was depicted by her being in the kitchen and him being fairly aloof and both of them encouraging their kids going to college (emphasizing

medical and law school). Ozzie is consistently wearing a suit and tie and they talk about how to deal with their sons' dating.

Father knows Best (1954-1960) takes place in a three-story house with a white picket fence and the pilot episode starts by Margret (mother) in the kitchen cooking and cleaning. James (father) is constantly wearing a suit and tie and is shown as being a little eccentric. The family dynamic was written so that Margret is the "voice of reason" and James is a thoughtful leader who offers prudent advice to his children. Jim was a salesman and manager of the General Insurance Company and Margret is a housewife. The Andersons have been characterized as "truly an idealized family, the sort that viewers could relate to and emulate". (Brooks) General Foods Inc. funded the show for the majority of their six years on the air.

I Love Lucy (1951-1957) takes place in New York City apartment and Lucy, is an aspiring actor, and her husband Ricky is the leader of band. This show chronicles the experiences that they both go through while they are trying to live in New York City. It shows the interactions and dynamics that make up the relationship between Ricky and Lucy as well as interactions with friends. It depicts them both dealing with everyday problems while establishing an example of what a male and female role could look like in the context of domestic partnership.

Leave it to Beaver (1957-1963) was one of the most popular shows in the 1950s, and it was a sitcom that detailed what life should be like in the suburbs. (Bornstein) The main character is a naïve and inquisitive boy named Theodore

“The Beaver” Cleaver. It chronicles his adventures at home, in school and around his neighborhood. The first episode shows the parents debating their approach to child rearing and their relationship in the context of their fictional situation. It also offers a glimpse of what the producers believe middle-class life should look like. The father wears a suit and a tie and the mother is constantly in the kitchen.

As The World Turns (1956-2010) was focused on how people with high powered jobs live their lives. It is based on psychological realism and character development. (Newcomb) The primary purpose of many characters was to comment on the crises faced and decision made by the town’s aristocratic residents. The show generally showed that all immoral behavior such as adultery would be punished and it tended to lean toward a more conservative paradigm, possibly because it was sponsored by Proctor & Gamble. (Carter)

Hypothesis and Explanation:

Nicholas Johnson (former FCC commissioner) once said, “All television is educational television. The question is: what is it teaching?”

The messages and parables that people get from television affects individual choices, which is why companies spend so much money on advertising. But these messages are much more profound than just what the best coffee or deodorant to purchase is. When sitcoms, variety shows, westerns, dramas and soap operas are viewed they perpetuate ambiguous values that are very open to interpretation (Eco). The theory of aberrant decoding dictates that

there are many different ways interpret a message, and sometimes what the receiver gathered was completely different than what the sender was intending. Just like any other piece of art, no one sees it in exactly the same way.

While producers and advertisers can easily communicate with the population, the population doesn't have the same luxury. And if an individual is interpreting the messages inaccurately they cannot get any more explanation than what is offered to them. This includes information about the messages and parables that television disseminates, like what was mentioned in the introduction, about the development of the many faucets of attitude, emotion, social behavior, and intellectual functioning.

There are myriad factors that go into forming a perception of something, from the mood that an individual is in when they receive information to their education and all their other past experiences. "What we see has a profound effect on what we do, how we feel, and who we are. Through experience and experimentation, we continually increase our understanding of the visual world and how we are influenced by it." (Parkinson) Up until the 1950s the majority of Americans only saw what their parents and people in their community wanted them to see. But TV enables 99 percent Americans to see what producers and advertisers want them to see for 2.71 hours per day.

The introduction of role models and values by the media was not a new thing at the time, and many of these shows were originally aired on the radio. Most of the shows that were broadcasted offer advice for parenting, marriage, child rearing and parables for myriad other topics. This includes examples of how

to live in America. But what happens when someone's life doesn't live up to these ideals that television says they should have?

There are many effects that can happen. Only a few are measureable though. People could get dissatisfied with their current living situations and will try and change them; this is why I think divorce will rise once the use of television is more widely spread. There are many reasons for this hypothesis, but the most poignant one being that TV gives people who offer stories that offer parables, and new role models that change family values and structures to the point of divorce. Television is at its core is a feedback loop which transmits new ideas and values into a society (Rushkoff). When new types of values and lifestyles are disseminated people begin to see things they are not used to and then want it for themselves. Then divorce is an organic reflection of this. Considering the content of these shows it wouldn't be a far off claim to state that there is a positive correlation or a causal relationship between the amount of television households and marriage dissolutions.

Academic studies of interpersonal relationships and divorce have found there are many reasons for marriage dissolution, but as it turns out there are some factors that are much more salient than others. Communication is by far the most cited reason for divorce, followed by basic unhappiness and incompatibility, respectively. (Amato) Ironically, television is a medium for communication.

The word communication is fairly ambiguous but it includes the ability of both parties to exchange information. This is a very important part of a marriage,

it is the way people express themselves and come to solutions for problems.

Television has been shown to change the way people communicate with each other (Zillich) and this could be the cause of a breakdown in communication and thus divorce.

Happiness also means many different things to many different people, but there are some causes that are ubiquitous. For example, when someone compares themselves to others and they see the other people marrying a spouse that they themselves would like, seeing kids are more well behaved, or someone else getting a good job, these types of comparisons all end up causing jealousy and therefore malcontent within the beholders life.

Another large cause for divorce is incompatibility, which also could be a cause of television. When people were not watching television they held certain values and strived for certain things, but when they started watching television they began to change these values and ambitions and it began to separate people on a fundamental level which made them incompatible. This could also include television watchers seeing different spousal options that in-turn could make them less likely to be content with their current situation, which make them incompatible. All of these possible reasons for divorce have been well articulated in the study that is most similar to this one, but it took place in Brazil.

Previous Research on Television and Divorce:

Despite the paucity of research of television and divorce there was one study that is reaching the same thing. In 2009 Alberto Chong and Eliana Ferrara

analyzed the domestic effects of television in Brazil. Called “Television and Divorce: Evidence from Brazilian Novelas” they explain that separation and divorce are a natural reflection from the moral values and modern ideas that are broadcasted into society.

Brazil started with a divorce rate of 3.30 per 100 marriages in 1984 and by the end of 2002 the divorce rate was up to 17.7. The study shows that there could be many reasons for this increase of divorce including the social zeitgeist regarding divorce. Up until 1977 it was illegal to get a divorce, and Brazilians are still only allowed one divorce in their lifetime. Rede Globo was introduced in 1965 but the dissemination rate was staggered. In 1965 only .1 percent of the population had access to television signals and it increased to 35 percent in 1980, 86 percent in 1986 and 90 percent in 2000.

They found that while there was an increase in divorce due to television, it has more to do with the content being aired rather than just having access to television in general. This conclusion was derived from the staggered distribution of *Novelas* or soap operas. They found distinct increases in divorce rates between the municipalities that received Rede Globo (only air *novelas*) and those who didn't, thus finding a causal relationship.

I believe this to be different in the sense that it is more of television in general that causes civil changes and not just soap operas. I believe that this could have an effect in both America and in Brazil. The culture within each of these countries is very comparable and there are more similarities within the

populations than there are differences. Therefore, I believe studies done in each country would be externally valid while compared to similar populations.

Data:

The data that was used in this research was obtained from many reliable sources. The television rates data is from A.C. Nielsen, which is one of the only companies that keep track of television viewership for the U.S. And the data about divorce was procured from the U.S. Department of Health, Education, and Welfare. Therefore the data is the most reliable that is available. For there to be concrete causal evidence for television causing divorce we need to look at the time when there is a staggered introduction so we can keep everything else constant except for the amount of people watching television. Therefore, I had to be strategic as to the dates that were considered for this study for the following reasons.

Since the late 1960s the amount of television households (houses that own a TV) with respect to total households is at 99 percent. This has not changed and it has been held constant for the past 40 years. Because there is no variation of total households to the amount of television households it doesn't do us much good because there is no relative change. There was a time when the household penetration rates varied by county. This time was up until 1965, and for various reasons, metropolitan counties adopted television at different rates than others. Some were much quicker and had 95 percent of the households owning a TV by 1952, and for others it took until the 1960s. But the difference in

adoption rates gives us a great organic experiment for being able to separate the causal and theoretical effects of divorce due to television.

Since the 1940s there has been a lot of data for both of these variables that have been collected, but the measurements have not been consistent. Nielsen started in measuring television rates in 1950 by collecting data for only 63 major cities. Not even a year later they raised their total observations to 365 cities. Then in 1956, they began collecting data for all U.S. counties. This obviously makes the geographical measurements inconsistent, and therefore unreliable up until 1956. This dataset did not have every year from 1956-1965 but rather published the television usage rate once every two years until 1958, so there are some gaps with the data. But considering this is the only offered information about television usage it makes it the most accurate information available.

The U.S. Department of Health, Education, and Welfare started to measure the “Vital Statistics” of the U.S. in 1939. This report includes numbers such as: the marriage/divorce, natality, mortality, morbidity, fetal and infant mortality and life table data. However they had the same issues as Nielsen as far as keeping the geographic information consistent. They were not consistent until 1950, and then they measured every odd year until 1958 where they only received and published information from 36 states. Plus sometimes their information was laid out by state and it included more nuanced information about the demographics of the marriages. Certainly this is useful to some but not for my purposes. So up until 1952 the data is not able to be accurately cross-referenced

and there are only a few years that is transferable. This along with the aforementioned reasons the data set used to analyze the relationships starts in 1952 and goes through 1965 skipping a few years in-between.

Another issue that might be a problem for the accuracy of the data is the U.S. Department of Health, Education, and Welfare does not include annulments some years. Although when they do, it only increases the divorce numbers by a small amount, but nevertheless there is still some discrepancy between the numbers and reality.

Due to all of these inconsistencies with the datasets that were available, I was only able use the information for the following counties: Los Angeles, San Diego, San Francisco, Denver, New Haven, Des Moines, New Orleans, Baltimore, Kalamazoo, St. Louis, Schenectady, Lancaster, Philadelphia, Providence, Austin, Dallas, Houston, Salt Lake City, Norfolk, and Richmond. Although the number of total counties is fairly low, they do offer a good representation of America. There are counties in the center of America and on both coasts, there are counties that are big medium and small.

Data and Empirical Approach:

In the hypothesis section I postulated that divorce rates will increase due to the higher percentage of people watching television. And since I had the data I also compared television-watching rates to marriage. To test the relationship between television and divorce I estimate:

$$Y_{it} = \beta_1 TelevisionRate_1 + \mu$$

This is the simple panel data equation. Where Y is the divorce rate and i refers to i^{th} entity, and t refers to the date it was recorded in area j . The divorce rate used in this study is measured by $Divorce_{it} = \frac{Total\ Divorces}{Total\ Households}$. Although this is not the traditional divorce rate measurement, it is a derivative of the one usually referenced (which is $= \frac{Total\ Divorces}{Total\ Population}$). I used this one because the geographical variables could be defined differently for the more data aggregators. The television rate is defined as $\frac{Total\ Television\ Households}{Total\ Households}$ per county. To account for errors I added μ .

As explained in the data collection section, the dataset is unbalanced and therefore using fixed effects in the OLS regression is essential to keep all the omitted variables constant. This works by treating $\alpha_1, \dots, \alpha_n$ as unknown intercepts and they are to be estimated. And because the α_1 in the following model can be thought of as the effect of being in entity i the terms $\alpha_1, \dots, \alpha_n$ it is entity fixed effects. The variation in the entity fixed effects comes from omitted variables that vary across entities but not over time. The equation is as follows:

$$Y_{it} = \beta_1 TelevisionRate_1 + \alpha_1 + \mu$$

All the estimates and variables are the same except for the dependent variable. Which in this case is the marriage rate and it is calculated by

$$\frac{\text{Total Marrages}}{\text{Total Population}} \text{ within the county.}$$

While I was collecting data for this paper I recorded additional data that was on the same table, just incase it would come in handy, and as it turns out it did. I thought it would be good to do the opposite, so I ran the same models but used marriages as the independent variable. Seeing if there was a change in the amount of marriages due to watching TV.

These aforementioned equations are the best regression models for this situation because they use panel data and my dataset is for multiple entities and each entity is observed in more than one time period. Both equations were used for both marriage and divorce rates.

Results and Findings:

VARIABLES	(1)	(2)	(3)	(4)
	Divorce Rate		Marriage Rate	
% of TV Households	0.00439 (0.01)	0.0012 (0.01)	0.0265 (0.02)	-0.0352 (0.04)
State F.E.	no	yes	no	yes
Year F.E.	no	yes	no	yes
Constant	0.00766 (0.01)	-0.00554 (0.01)	0.00928 (0.02)	0.0618 (0.04)
Observations	141	141	147	147

R-squared	0.00	0.096	0.001	0.104
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Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table contains my main set of results. It reports ordinary least squares coefficients and standards errors. The first two columns show the two separate regressions that I ran which focused on the changes in divorce rate. The third and fourth column does the same but for the marriage rate. The first column for each variable doesn't take fixed effects into account and the second column does.

The results of my regressions are surprising and good for the American public. By comparing changes in the percent of households owning televisions to the marriage and divorce rate there is no statistical significance between any of them. The most significant relationship was between the marriage rate and television per household. This comparison has a coefficient of .0264 and a p-value of .143.

These results are dubious to say the least. The story that could most likely explain it is the numbers that were collected were not entirely accurate because of changes in measurements during the time the data collected. While these results come from the most accurate data, there might need to be more time to see differences in the results. Just like with Levitt's research, it took 10 years to see any difference in crime outcomes. Another explanation of what actually happens could be that television just might reinforce the beliefs that we have already had. And therefore the pattern of the people who get married and

divorced does not change just because of television. Also, this study didn't analyze the differences in content that people were exposed to in regards to their actions. The study done in Brazil was concerned about the content and not the exposure to television in general.

Conclusion:

This paper has explored the effect of television on divorce and marriages as they are related to the exposure of television from 1952-1965. These dates were chosen because this was the time period where there were big differences in television penetration rates depending on the county/city. While this was the only time period which is best for measuring cultural effects, because of the staggered introduction of television, divorce and marriage was not one of the things TV affects. But considering the pervasiveness of television, it is not unreasonable for an individual to question what messages are being introduced to them and what effects they might have. Television mimicry has been proven to have an effect on an individual (Baaren) but it is not shown through divorce rates.

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