



# *That '70s Show*

## An Analytical Postmortem

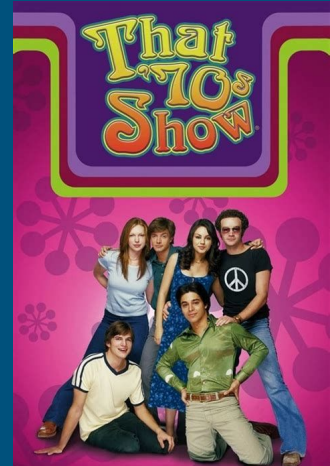


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# That '70s Show

- American Sitcom about a group of teenage friends set in the '70's
  - Originally ran on Fox between 1998-2006
  - Spans 8 seasons, 200 episodes



That '70s Show follows a group of teenagers in Wisconsin as they go about their early adult years. The show debuted in 1998, and ran 8 seasons, concluding in 2005. During the time of its original run, the show was a mid-range performer for Fox, though streaming services like Netflix have breathed new life into the show, much like many other sitcoms from the era.

# The Departures of Grace and Kutcher

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- After Season 7, two of the main characters (portrayed by Topher Grace and Ashton Kutcher) depart the show
  - They both make infrequent appearances throughout the final season
- This moment is often cited as the downfall of the show causing a decline in quality, and subsequently the cancellation of the show after the 8th season
- Does the data support this claim?

Ashton Kutcher and Topher Grace played Michael Kelso and Eric Foreman respectively. These two became the breakout stars of the show, and at the conclusion of Season 7, decided it was wiser for them to move on to other projects, rather than to continue on with the show. Kutcher returned for the first few episodes of Season 8, concluding his character's storyline. Grace returned for a brief appearance in the finale of the show. The actors' sudden departures lead to the writers attempting to fill the void with characters both old and new, but nothing seemed to stick. Ultimately, the season was disliked by viewers, and the show was concluded at the end of the 8th season. This departure and subsequent drop in quality is generally cited as the reason why the show was cancelled. We want to see if the data supports this claim.

# Data Description and Clarification

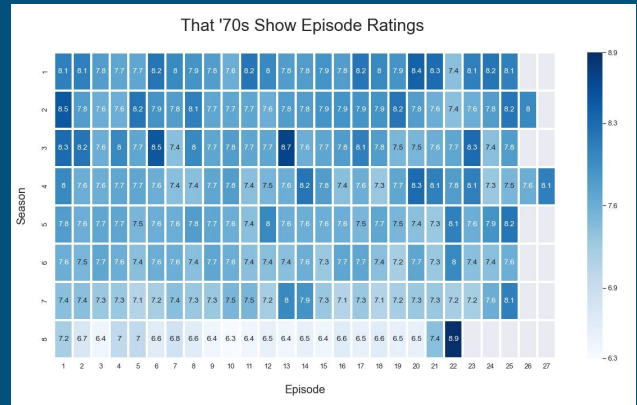
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- IMDB raw data accessed through IMDBPy and BeautifulSoup tools including:
  - Season and episode ratings
  - Sitcom series lengths,
  - Sitcom episodes ratings throughout seasons
  - Rating of shows that run N seasons (1 - 10 seasons)
  - Genres of top 30 viewed shows from 1998 - 2005

The data we are using has been taken from IMDB through their API as well as scraped using BeautifulSoup. We have used a variety of features, including season and episode ratings and series lengths, which you will see in a bit.

# Are the departures really the cause?

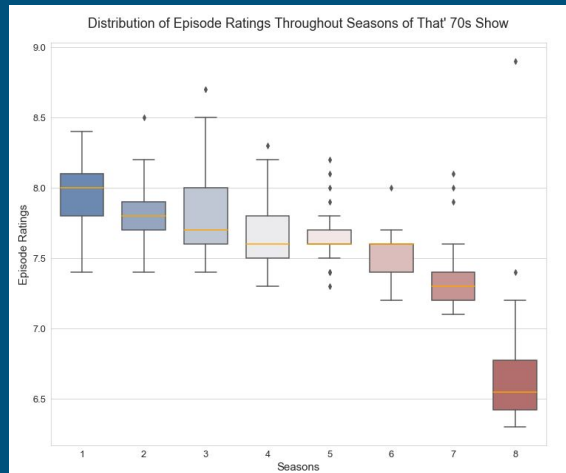
- The heatmap shows that ratings of the show gently decline before the departure of Topher and Kutcher
- Season 8 is the least liked season
- Most liked episode is the series finale



It is tempting to want to cite the departures of the actors as the reason why the show was cancelled, but is that really the case? This chart shows a heatmap of the episodes in each season. As we expect, we do see a dramatic jump to lighter shades of blue (representing lower scores) between seasons 7 and 8. But, more importantly, we are also seeing a gradual lightening of the shade of blue throughout the chart, suggesting that the show may have been declining in quality before the departures. One interesting thing to point out is that the highest rated episode of the series is the series finale, which also has both Kutcher and Grace reprising their roles for one final time. We think that viewers hold that episode in high regard because it concludes the storylines that they have been consuming over 8 seasons, which has it hold an extra emotional weight than many other episodes.

# Are the departures really the cause?

- The boxplot chart of season ratings further reveals this trend in a linear fashion
- Still, we see a significant drop between season 7 and season 8
- If we see a downward trend before the departures of these actors, **there must be other factors** involved in the show's cancellation



A boxplot representation of this same data reveals what we suspected. The show sees a gradual decline in viewer ratings from season to season and a sharp drop in the last season. Since we are seeing this decline in the seasons that Kutcher and Grace fully participated in, there must be other factors at play contributing to the show's decline in quality and cancellation.

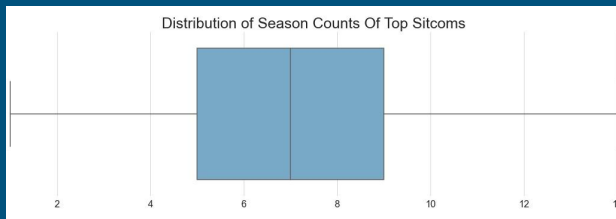
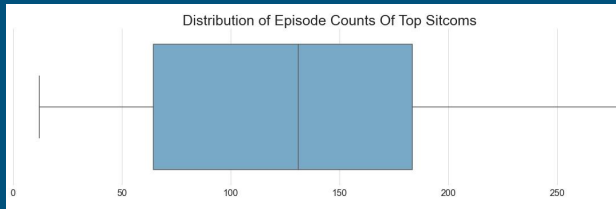
## To dig deeper, we have to zoom out...

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- Nothing about the show itself is eluding to any reasons why the show may have been cancelled
- We have to look at the show within the context of other shows

Now that we've established that Kutcher and Grace's departure was not the only factor contributing to the show's decline, we must look elsewhere to find a reason as to why the show was canceled. The answer starts to reveal itself when we analyze That '70s Show in the context of other television

# The Lifespan Of Sitcoms

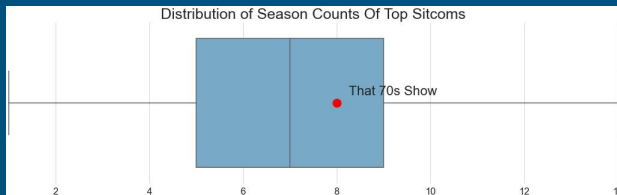
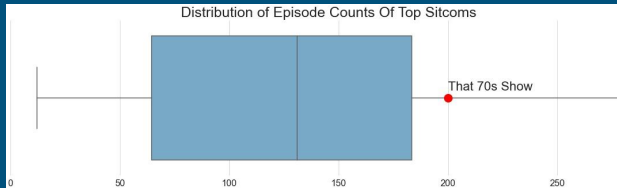


- Of the top 50 Sitcoms (according to IMDB),
  - Most run for between 75-175 episodes
  - Most run for between 5 and 9 seasons.

First, we want to take a look at the lifespan of most sitcoms. The list of sitcoms we used was taken from an IMDB list, and looking at the distribution revealed that most sitcoms run for between about 75 and 175 episodes, as well as 5 to 9 seasons.



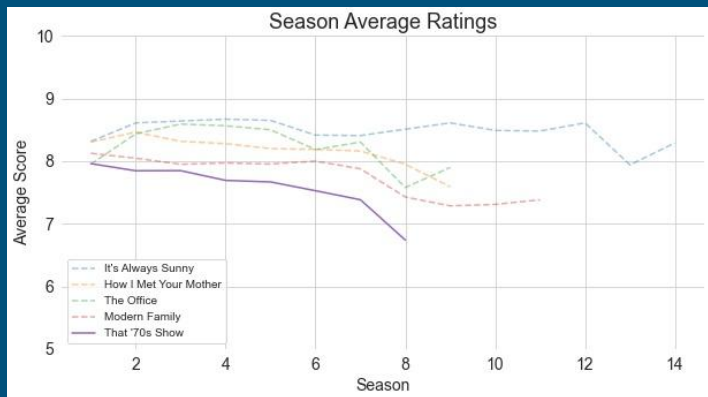
# The Lifespan Of Sitcoms



- Of the top 50 Sitcoms (according to [IMDB](#)),
  - Most run for between **75-175 episodes**
  - Most run for between **5 and 9 seasons**.
- That '70s Show ran for
  - 8 Seasons
  - 200 episodes
- From a lifespan perspective, That '70s Show was already an aging entity

Now, with that context, we can see that That '70s Show definitely sits as a more mature series, running for more episodes and seasons than many of the most well-respected sitcoms. With this information in mind, it's not hard to assume that the series' length has made some of the characters and stories slightly stale to viewers.

# TV Shows Don't (Usually) Get Better



- In general, it is far more common to see a show's average ratings decline or not change significantly over its lifetimes

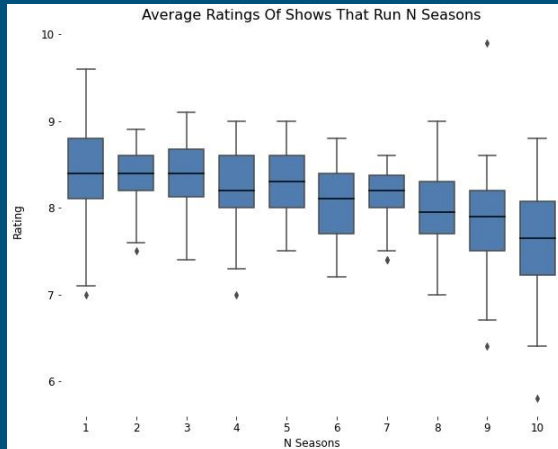
10

And we see this suspicion of quality decline in a lot of famous sitcoms. Many sitcoms see a familiar pattern as *That '70s Show*, slowly declining in quality over time. It is fairly rare to find a show that does increase its viewer ratings over time, and of those shows, they tend to be non-syndicated dramas, meaning their stories build on themselves over time (*Breaking Bad*, *Ozark*, *Game Of Thrones*). The reality is, there is staleness baked into the common sitcom. Sitcoms tend to adhere to what *TvTropes.com* refers to as "Status Quo Is God." "Status Quo Is God" is the idea that, whatever stories may happen to the characters, they must return to the state in which they began. This is done, intentionally, as to prevent "Continuity Lock-Out," which is viewers leaving TV programs because they are not caught up on story. In this lens, "Status Quo Is God" is both a Sitcom's greatest asset and downfall. It is persistently welcoming to new viewers, but also encourages the denial of change.

This idea is reinforced by the fact that many later seasons tend to see sharper declines (as in *How I Met Your Mother* and *Modern Family*)

We would also like to point out the top line on the chart, which is the contour of season averages for *It's Always Sunny in Philadelphia*. *It's Always Sunny* has ran for 14 seasons, but a new season is not produced every year. We think this could help negate some of the staleness of Status Quo Is God, creating a less severe downward trend.

# TV Shows Don't (Usually) Get Better



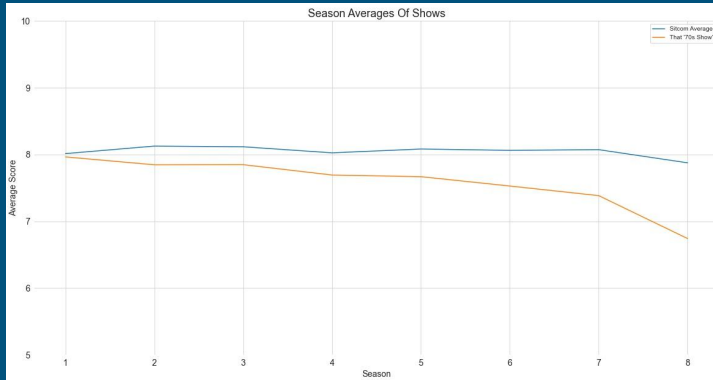
- Shows that run longer tend to have lower overall average episode scores than those that run shorter
- Given this information and the information from the previous slide, if That '70s Show continued, it is **unlikely** its quality would have improved.

11

Continuing our discussion from the previous slide, this chart shows the average episode rating of shows that run a given amount of seasons. Reinforcing the idea that running for longer is actually detrimental to the quality of a show, we see here that, especially in shows that run for 8, 9, or 10 seasons, quality is mostly lower amongst longer running shows.

Given the trend That '70s Show was taking and the overall trend of quality as shows span more seasons, if That '70s Show were to continue past season 8, we would not expect it to get better. Rather, we would expect it to get worse, considering its current trend and the necessary changes that would have to be made to accommodate the loss of Kutcher and Grace

# TV Shows Don't (Usually) Get Better

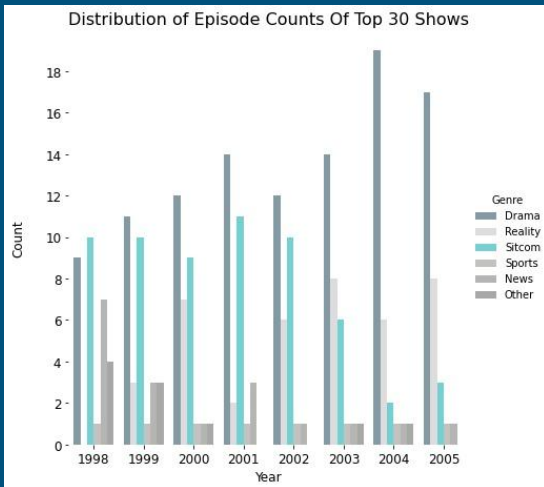


- Compared to the average contour of the top 50 sitcoms, That '70s Show has underperformed and had a more pronounced downward trajectory

12

With this in mind, we took the average score of every season for the top 50 sitcoms list referenced earlier, and graphed the scores to compare its trajectory with That '70s Show. The average score over seasons tends to hover around 8, and we can start to see that later season dip show up between seasons 7 and 8. When compared to the trajectory of That '70s Show, That '70s Show underperformed the average, and given what we have seen in the previous slides, we don't see a lot of reason to expect that it would get better past season 8, considering its current trend and the necessary changes that would have to be made to accommodate the loss of Kutcher and Grace

# A Shifting Market



- In the time that That '70s Show debuted to when it concluded, the demand for different genres of shows shifted
- When That '70s Show initially ran, 10 of the top 30 shows of the year were Sitcoms
- During its final season in 2005 only 3 of the top 30 shows of the year were sitcoms

13

Finally, the last thing we think that contributed to the show's demise was a changing market. Of the years That '70s show ran, the number of sitcoms that made up the top 30 most viewed shows of that year declined sharply. In 1998, sitcoms made up 10 of the top 30 shows, while in 2005, sitcoms made up **only** 3 of the top 30, with an all time low of 2 in 2004. Meanwhile, drama shows increased in popularity in the same time period, increasing from 9 to 17 of the top 30 shows of the year. And though not highlighted in the chart, the end of That '70s Show's run was also the beginning of the reality TV Boom in the 2000's. It's clear that the market for That '70s Show had shifted during the time the show had run.

To highlight this point, in the years 2005 - 2006 (the final year of That '70s Show), Grey's Anatomy, Supernatural, Criminal Minds, Hell's Kitchen, and Keeping Up With The Kardashians all premiered, and all would go on to surpass 15 seasons. None of these shows are sitcoms.

# The Value Proposition

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- Imagine you are an executive making the renewal call. Given what we've learned, That '70s Show:
  - Has already ran for longer than most Sitcoms
  - Has viewer satisfaction that has slightly (but steadily) declined since Season 1
  - Belongs to a genre that consumers are losing interest in
- Consider again the departures of Topher Grace and Ashton Kutcher
  - The show will need to be adapted to conform to a new dynamic
  - The show will likely become more expensive, as contracts for existing characters will need to be renegotiated.

14

Now, put yourself into the shoes of an executive at Fox choosing whether to continue production of That '70s show past season 8, or to create an all new show for the same time slot. Continuing with That '70s Show would mean accepting the fact that the show likely does not have much life left, even had the two not departed. The show also has seen a steady decline in quality that, considering our analysis of other, similar shows, does not look likely to improve. Furthermore, since both Kutcher and Grace left in the same season, it's probably safe to assume that it was time for contracts to be renewed, which would mean running a show with all of this baggage at a higher cost than previously. On top of it all, the Sitcom was a format that had fallen out of favor in the shows run.

Factor all this in with the risk of having to adapt the show to work without Kutcher and Grace, it's a huge gamble. Whereas the alternative is piloting a new show without big name stars, with a concept that would fit the shifting demand for current (at the time) television. It's easy to see why the show was canceled.

# Did Kutcher and Grace Leaving Kill The Show?

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- No, a changing market and declining view satisfaction ultimately killed the show.
- The departures only accelerated its demise.

So, do we think Kutcher and Grace leaving the show caused its cancellation. The short answer is No. The long answer is that the show was seeing signs that it was on the outs before the departures, however it is probably fair to say the departures took away the final season or two Fox probably could have gotten out of the show.

# Why do shows last?

- Creating a successful show is hitting a moving target
  - There is no easy answer
- Some things we noticed may help longevity:
  - Not being on a major network
    - Content
    - Schedule
      - It's Always Sunny In Philadelphia
  - Ability to be syndicated
    - Like sitcoms, these shows are also designed to reduce continuity lock out
    - Many of the longest running shows have "drop in drop out" isolated story lines
      - The Simpsons, CSI, Grey's Anatomy etc.

16

We did not do direct analysis involving what exactly makes a show last a long time, nor are we sure that finding a definitive answer is even out there. Creating a successful show is truly attempting to hit a moving target. For example, a show like **MASH** was incredibly successful in its time, but would not work during wartime or more politically turbulent times, and matching content to the state of the world is certainly non-trivial. However, we did notice a few things that could potentially be factors in how long a good show can last. We think a successful show away from a major network has the ability to last longer than one on a major network. Non-major networks offer more content flexibility (more raunchy content is allowed on cable), as well as allowing for additional flexibility in production schedules (many of these networks don't require a season every year). We saw this on our trajectory chart with **It's Always Sunny In Philadelphia**. We also think that the ability to be syndicated is a huge boon for a successful television show's longevity. For those of you who don't know, syndication is when television is designed to be resold after its initial run. Since the shows are usually resold to smaller networks with less dedicated viewership, these networks are usually looking to purchase shows with low continuity lock-out. As such, many of the longest running television shows are written with isolated storylines that are able to engage anyone regardless of prior knowledge of the show. A great example of this are crime dramas. While the characters may have interpersonal relationships, there are always new characters and storylines that are introduced and resolved within the span of the episode.



# Works Cited

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- [https://en.wikipedia.org/wiki/Top-rated\\_United\\_States\\_television\\_programs\\_by\\_season](https://en.wikipedia.org/wiki/Top-rated_United_States_television_programs_by_season)
- <https://www.imdb.com/list/ls069786537/>
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- <https://www.ratinggraph.com/>
- <https://tvtropes.org/pmwiki/pmwiki.php/Main/StatusQuolsGod>
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# A Quick TV Tropes Tangent: Status Quo Is God

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- Sitcoms are often written to minimize Continuity Lock-Out
  - When TV was not streaming, networks did not want to turn away new viewers with plots that you could not drop in to at any point
- This often results in very little changing from episode to episode
  - Even during more extended plotlines, things often return to the way they began
- This makes it hard for writers to “Steer The Ship” in dramatic or meaningful ways