

UNCOVERING THE NARRATIVE STRUCTURE OF *BREAKING BAD* THROUGH A MULTIDIMENSIONAL QUANTITATIVE ANALYSIS

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ABSTRACT

The quantitative analysis of TV series has so far focused on the interactions among characters, typically employing a network model. However, such analyses can exploit additional information extracted as manual annotation from the series. That additional information can help us obtain a more complete view of the series narrative structure, accounting for the sequence of scenes and shots. In this paper, we propose an analysis of the TV series *Breaking Bad* that relies on the measurement of locations and scenes as well as the speech and video presence of individual characters. We also exploit those data to measure the degree of concentration achieved by locations and individual characters. We observe a consistent pattern for most variables, which highlights the stylistic characteristics of the series.

1. INTRODUCTION

The quantitative analysis of texts is now an established branch of research and has been applied to literary and non-literary texts as well. Most efforts have been devoted to representing the interactions among the characters through a social network and examining the sentiments that characters express. Examples of the former class range from the analysis of Shakespeare's Hamlet and the impact of possible modifications to the characters' network by Moretti (2011) to the description of the co-occurrences of characters appearing in Marvel Comics performed by Alberich et al. (2002) or in *A Storm of Swords* (the third book in the *Game of Thrones* series) by Beveridge and Shan (2016) to the detection of communities embedded in Victor Hugo's *Les Misérables* by Newman and Girvan (2004). The latter class includes instead scholarly works directed at extracting the sentiments of characters from their words, as accomplished, for example, by Nalisnick and Baird (2013) for Shakespeare's plays. Some authors have also analysed characters' sentiment to predict movements in the plot (Gao et al., 2016).

Similar analyses for TV series are instead fewer and relatively more recent. Again, some examples can be considered for either the network approach or the sentiment-based analysis. Social network analysis has been applied to three TV series (*Mr Love, Westworld*, and the *Dream of Red Mansions*) (Zhang et al., 2018). Tan et al. (2014) have used the co-occurrence of characters in scenes to build the network describing characters' interaction in *Stargate* and *Star Trek*. The network built by Bazzan (2020) for four series (*Seinfeld*, *Friends*, *How I Met Your Mother*, and *The Big Bang Theory*) considers a richer set of interactions, considering both when two characters talk and when they touch or have eye contact. Bost et al. (2016) have proposed a new social network analysis method (narrative smoothing) to analyse series where parallel subplots are present. A survey of research efforts to extract networks of characters encompassing all works of fiction (e.g., novels, plays, movies, and TV series) has been provided by Labatut and Bost (2019). Basner (2021) has further proposed sentiment analysis based on a set of expert (human) scorers to analyse friendship ties among the characters in *Friends*.

However, the analysis of a TV series may go beyond the interaction between characters and consider the overall structure of the plot instead. A television story is filmed and watched in scenes and sequences, a fact that is ignored

when we simply perform time integration by collapsing all the characters' appearances. In this paper, we propose a first step towards a structural analysis of TV series that considers the basic elements through which narration develops. In particular, we aim to uncover the narrative style expressed through plot structure by measuring several structural endogenous dimensions, including the video and audio presence of characters and information related to the locations and their re-use during an episode. The ultimate aim is to arrive at the stylistic signature of a TV series by examining its structural dimensions. Here we conduct the first example of such analysis on the series *Breaking Bad* (2008-2013), hereafter referred to as BB for short.

In order to pursue that stylistic investigation, we formulate the following research questions, focused on characters and locations:

- RQ₁ Do some characters predominate over others?
- RQ₂ Does the presence of characters evolve over time?
- RQ₃ Does the series revolve around a few locations?
- RQ₄ Do we observe frequent changes in locations?

The first research question helps us go beyond the obvious answer that Walter White takes the scene. We wish to examine the role of secondary characters and how much their presence lies behind that of the main character.

Through RQ₂, we wish to see if the possible evolution of some characters over time, i.e., their growth and/or decline, betrays strategic choices by the series' authors. In the case of BB, we know of the spin-off associated with Saul, which was probably preceded by his presence getting bigger.

By the third research question, we wish to investigate how the series is placed between sitcoms and action movies. We expect to see a very small number of locations used over and over again (in the limit, a single location) if the series is more similar to a sitcom. On the contrary, if we observed many locations, the narrative style would be quite more dynamic.

The issue of locations is further analysed through RQ₄, whereby we wish to see if the narration employs frequent changes of locations. That could also happen with a limited number of locations, e.g., two locations with a continuous swap back and forth between them.

After introducing the series in detail in Section 2, we describe the information we extract for each episode in Section 3 and report the results in Section 4. The final section is devoted to discussing the results.

2. THE BREAKING BAD SERIES

2.1. *Breaking Bad* and Complex tv

On January 20, 2008, the first episode of a television series destined to become a global success was broadcast on AMC's cable channel: it was *Breaking Bad* (2008-2013). Conceived by Vince Gilligan, former screenwriter of *The X-Files* (1993-2002), the series would last five seasons, for a total of 62 episodes. Despite a non-exciting start in the ratings, it got more and more acclaim little by little, becoming a cult phenomenon. It received 139 awards across the most important TV series festivals (such as the Emmys or the Golden Globes); above all, it produced an infinite series of *speeches* with the public, according to the new practices of contemporary fandom (see Tralli, 2018:187-212 and Mittell, 2017: 430-477). The scholars who have approached the analysis of this television series have highlighted some of its aspects: its ethical aspects and especially those concerning the anti-hero protagonist (Grasso and Penati, 2016: 163-170; Martin, 2018: 357-397; Bandirali and Terrone, 2019: 11-21; Bernardelli, 2016: 1-19); its linguistic and narrative ones (Checcaglini, 2018 ebook: 1636-2104); and those concerning the contexts, politics (Pierson, 2013: 15-103). There has been no lack of studies on the protagonist's new form of masculinity (Faucette, 2013: 73-86) and the poetics of space (Martin, 2015: 151-158). Of course, *Breaking Bad* should be analyzed by placing it in the context of complex TV (Mittell, 2017), of which it is one of the most striking examples, also due to the importance of its transmedia strategy (Dusi and Grignaffini, 2020: 163-165).

Complex TV developed in what has been called the second Golden Age of American television (Thompson, 1997), which started in the 1980s but developed mainly in the following two decades. That is a period when we start talking about serialized series (Pescatore and Innocenti, 2012: 18-22), where the anthology plot (vertical plot) is flanked by a running plot (horizontal plot), destined to become the most important. That is the genesis of the so-called expanded narrative universes, some of which also take the forms of narrative ecosystems (De Pascalis and Pescatore, 2018: 19-30).

In these new forms of seriality, we are no longer faced with single self-contained episodes, but with interrelated and multistrand episodes (which follow more narrative arcs, generally linked to several characters, in addition to the main one), with many crossmedia or transmedia derivations (Jenkins, 2006). We begin to witness a type of writing that is much closer to literature, with each episode taking the form of a chapter within

a long novel. The literary aspect of the series is visible through the intensification of narrative continuity and the contraction of seasonality (from 22 episodes per season to 8-13).

The series emphasizes the novelistic aspect and approach the novel form (Palmieri, 2018: 115-116). Vincent Canby of the New York Times has dubbed *The Sopranos* and a small number of other TV series *megamovies*: he compares them to Hollywood movies but points out that the show is so long and so involved that the term "movie" cannot do justice (Canby, 1999).

On the other hand, this temporal reduction corresponds to a textual and paratextual intensification, which expands the universe and leads to a spatialization of the series (Palmieri, 2018: 119-126).

Breaking Bad (2008-2013), a complex series par excellence, is a design model by derivation in the media panorama, where transmedia extensions are expected to originate from objects with a traditional narrative structure. Such extensions are "derivative products that were not foreseen when the series was designed but are added or generated by users creating an extended narrative" (De Pascalis and Pescatore, 2018: 27). In fact, BB comprises the following extras in addition to its 62 episodes:

- a miniseries of 5 mini-episodes entitled *Breaking Bad: Original Minisodes*, which told unreleased aspects of the series (available online and on DVD extras);
- the spin-off on one of the characters from the original series, the lawyer Saul Goodman, entitled *Better Call Saul* (2015-2020);
- the film *El camino* (2019), a sequel to the TV series and dedicated to the character of Jesse Pinkman;
- a game originating from the series, published in Italy in 2018 by Pendragon Game Studio under an exclusive license.
- a comic book (*Breaking Bad: All Bad Things*);
- many paratexts produced by fandom (among which the breakingbad.fandom.com site stands out).

They are transmedia products of the what-if type, as Mittell defines them, where different paratexts pose hypothetical eventualities rather than canonical certainties. Those paratexts invite viewers to imagine alternative stories, detach themselves from the main text, and project themselves into parallel dimensions, where the mood, the style and the tone of the series, and its characters lie in the foreground rather than the continuity with the plot and the canonical narrative world (Mittell, 2017: 512-518). Like all complex series, BB has seen 25 different directors (including lead actor Brian Cranston

and Gilligan for five episodes, starting and closing the series with the pilot and the final episode) and at least ten screenwriters. What gives uniformity, continuity and meaning to the whole product is the stylistic presence of the showrunner, the aforementioned Gilligan. Without dwelling here on the role of the showrunner in contemporary television series, it will suffice to remember that spectators assigned him the authorial responsibility of the whole collective process, though in a complex system such as that of the production, writing, and realization of a television series. That responsibility is an honour and a burden at the same time because all the potential criticisms, such as for inconsistencies and lapses of style, lie on the shoulder of the showrunner (Mittell, 2017: 156-203).

2.2. The moral unraveling of a man: from Mr Chips to Scarface

When telling the genesis of BB, Gilligan claims he wanted to narrate the transformation of an American everyman, a nobody, a boring and dull man, into a ruthless criminal of the drug cartel: the metamorphosis of Mr Chips to Scarface (Grasso and Penati: 167). The series centers on Walter White, a middle-aged chemistry teacher in Albuquerque, New Mexico. Married, with a disabled teenage son and a daughter on the way, Walt has a boring life, is dissatisfied, full of debts (which compels him to get a second job in a car wash). His life changes dramatically when he discovers he has lung cancer and is without health insurance to help him pay for the expensive treatments. After stumbling upon an old student of his, now a drug addict, Jesse Pinkman, he decides to use his chemistry skills to make and sell methamphetamines. He will thus become the feared Heisenberg, violent, ruthless, immoral owner of the drug cartel in his city. Other characters revolve around him to better outline his character but also carve out a significant role according to the multilineal narrative mode typical of current seriality.

So, we have the narrative arc of the main character that outlines the journey of a hero, actually of an antihero who embraces his dark side. Walt is one of the *difficult men* told by the contemporary series (Martin, 2018). The narrative arcs of the other characters fold out along the main character subdued in Walt's spiral of evil and violence: hardly anyone saves itself within the immoral world of BB. We observe multiple stories unfolding simultaneously, with narrative arcs sometimes intertwining and other times diverging. Rather than being based on the narrative enigmas it proposes to the viewer (typical of a product like *Lost*), the functional aesthetic of the

series, i.e., its "special narrative effect" (Mittell, 2017: 84-103), mostly develops through its ability to tell the transformation of his characters and the consequent evolution of the narrative world with depth, precision, and humanity. The complex characterization of Walt and the other characters causes the audience to get a sort of functional attachment to the story: "as spectators we are involved in the construction of the character, focused on the performance, fascinated by the attempt to read the mind of the assumed author and we cheer on Walt within the narrative" (Mittell, 2017: 275).

On the other hand, one of the main reasons for a viewer to watch a program is precisely the interaction with its characters: an emotional experience that allows us to enter the narrative world, a world that will accompany us for a long time, and which gratifies us like interactions with real people and situations. Each episode of BB is 45-47 minutes long, except for the pilot and the last two, which are over 50 minutes. Their structure is mainly horizontal. It is hard to find self-contained conflicts within a single episode. Each conflict resolution turns into a new problem to address: narrative continuity is privileged (except for episode 10 of the third season, which is a stand-alone one). Conceiving the product in seasons favors that choice as scriptwriters can think of it as a continuum since conception. Products of broadcast television are instead made from a single pilot, which, if successful, will develop over one or more seasons. Each episode opens with a teaser, followed by the theme song and four narrative acts typical of quality TV storytelling, such as *The Sopranos* (1999-2007). Those teasers are often flashforwards, subsequently linked up at the end of the episode or even at the end of the season: the narrative circularity is a crucial element of the whole series. They are narrative devices typical of the complex TV that serve to activate the attention of the viewer; they are narrative hooks (Thompson, 2012: 36) that are part of the storytelling of complexity, which requires greater participation on the part of the viewer in reading the story. These are typical techniques of the Baroque style of contemporary productions, which have fueled the viewer's awareness "of narrative mechanisms, encouraging him to get involved in the story but also to think about the formal aspects", that is, about "how" it is told (Mittell, 2017: 91).

3. MEASUREMENTS AND STRUCTURAL DIMENSIONS

As hinted in the Introduction, our aim here is to understand the narrative style of the series by examining its structural

elements only. In this section, we describe the features that we consider representative of the structure of an episode and provide a rationale for them. We call them structural dimensions since they may be read as an overall multi-dimensional description of the structure of the series' episodes. We will derive those dimensions from a set of basic measurements of the episodes. Our approach is similar to that taken by Bost et al. (2020), who provided manual annotations for speech and speaker turns, shots, and interlocutors for several TV series, though we do not consider the same set of quantities as theirs.

For our purposes, we see the structure of an episode as a sequence of scenes, where a scene is an event that takes place entirely in one location or time¹. We do not distinguish here between different shots in the same location, as long as the location stays the same (e.g., all that is filmed inside Walt's house is one scene, though the camera may zoom on a particular or get a different shot with a different angle). Since different scenes may be filmed in the same location, we also count the number of different locations used in the same episode. For example, in an episode made of the following sequence, we count three scenes but two locations:

- Scene 1: Walt's house;
- Scene 2: Jesse's house;
- Scene 3: Walt's house.

For each scene, we annotate its location, its duration (with a time resolution of one second), and the characters who are present. If several characters are present in the same scene, we attribute a visual presence as long as the duration of the entire scene to each of them. If the characters change during a scene, we keep track of those changes by attributing the actual presence to each character. In addition to the video component, we also account for the audio component by examining the dialogues. We count the number of speech lines for each character over the episode. For our purpose, we use the convention of considering a single line of speech for the character talking until another character takes the turn, no matter how many words or utterances the character pronounces. This convention exhibits some limits, of course, since long monologues are counted as a single speech line and are therefore undervalued. However, the other side of the coin is that this convention should be replaced by one stating when a new speech of line should be considered to start during a long speech by a character. Speech line detection could be accomplished based on the time elapsing between

one speech line and the next one (i.e., assuming that a new speech line has begun when the time from the last word exceeds a given threshold), but it would leave us with the problem of (arbitrarily) setting the threshold. If the speaker starts speaking to a different character, we consider it as starting a new dialogue (hence, a new line of speech). Summing up, our basic measurements for each episode are:

- Number of scenes;
- Number of locations;
- Duration of each scene;
- Characters present in the scene;
- Duration of the presence of each character;
- Number of speech lines for each character.

All the measurements were taken manually, employing the time indication embedded in the video as played on Netflix. The data were then moved onto an Excel file and later saved as csv files. A list in R was created for each episode for the further processing steps with the following information (from which all the previous items can be extracted):

- Location;
- Starting time;
- Ending time;
- Characters and no. of speech lines.

As stated earlier, we employ those measurements to derive a set of structural dimensions. We consider first the video component and then the dialogues.

First, we consider the ratio of locations to scenes. We call this ratio the Location Rotation Index (RLI). Since the number of locations is not larger than the number of scenes, the RLI takes values in the [0-1] range. If that ratio is low, a small number of locations is used time and again during the episode. For example, if we have just two locations, and the camera swaps between them, building a total of 20 scenes (we have, e.g., the sequence Location A → Location B → Location A → Location B → Location A, and so on), the RLI is $2/20 = 0.1$. On the other hand, if we have a single location used throughout the episode, the RLI is $1/1 = 1$, since we have one scene that takes place in one location. Having defined the RLI that way, we have the advantage of it being limited to the unity interval; of course, the disadvantage is that its definition is a bit counterintuitive: low values of the Location Rotation Index show a significant rotation between locations (i.e., the same location being used over and over in alternation with the others).

Another video feature concerns the distribution of the episode's time among the locations. In this case, we wish to see if one or a few locations dominate the episode. If a single

¹ see the page <https://www.movieoutline.com/articles/a-glossary-of-screenwriting-terms-and-filmmaking-definitions.html#> for a list of terms

location were used throughout the episode, we would have the maximum possible dominance, i.e., the equivalent of an economic monopoly. For that purpose, we borrow terminology and indices from the economic literature. We refer to the distribution of time among one or a few locations as a concentration phenomenon, and we employ a concentration index to measure the extent of that phenomenon. Examples of high concentration for locations are sitcoms, where one location is predominantly used. As to the specific concentration index to use, we follow the same choice made by Fronzetti Colladon and Naldi (2018) and Fronzetti Colladon and Naldi (2019) for characters in the Big Bang series and adopt the Hirschmann-Herfindahl Index (HHI). The genesis and definition of the HHI are well explained in Rhoades (1993) in its original function, i.e., to measure the degree of concentration in a market by summing the squares of the market shares. Naldi (2003) provide a comparison of its characteristics with other indices that serve a similar function. In this context, we can consider the fraction of time that a location takes within the duration of an episode as the equivalent of the market share. If the duration of the episode is D and we have n locations in that episode, with d_i being the overall presence of location i (in the same unit of measurement of the episode's duration, e.g., minutes), the HHI is defined as

$$HHI = \sum_{i=1}^n \left(\frac{d_i}{D}\right)^2.$$

For example, if we have 3 locations in an episode, which appear respectively for 20, 10, and 5 minutes (so that the overall duration of the episode is 35 minutes), the HHI is

$$HHI = \left(\frac{20}{35}\right)^2 + \left(\frac{10}{35}\right)^2 + \left(\frac{5}{35}\right)^2 = 0.429$$

This index takes value in the [0-1] range, with values close to zero representing a uniform distribution of presence and value close to one representing a high concentration of presence by one (or a few) location(s) instead. Actually, the minimum value of the HHI, representing the minimum degree of concentration possible, is not zero but depends on the number of locations. Precisely, if we had n locations that share the episode time equally, the minimum HHI would be $\min HHI = 1/n$. For example, if we have just two locations sharing the episode time equally, we would have $HHI = 0.5$. So, we can use that floor value as a benchmark to check if there are concentration phenomena.

If we turn from locations to characters, we can similarly compute the HHI for the video presence of characters. We can exploit that index to distinguish episodes where a single leading character stands out (higher HHI) versus episodes where we observe more choral participation (lower HHI). In addition to the HHI, which provides a single value for each episode, we can dissect the presence of each character by computing its share of video time. We have to redefine the HHI to take into account that we are dealing with the presence of characters. If we indicate by L_i the set of scenes where the character i is present in the episode, by n_c the number of characters appearing in the episode, and by l_j the duration of scene j , the HHI is

$$HHI = \sum_{i=1}^{n_c} \left(\frac{\sum_{j \in L_i} l_j}{\sum_{i=1}^{n_c} \sum_{j \in L_i} l_j} \right)^2$$

While the HHI provides us with an overall indication of concentration, the character's share $HHI = \frac{\sum_{j \in L_i} l_j}{\sum_{i=1}^{n_c} \sum_{j \in L_i} l_j}$ helps us identify the contribution of each character.

In addition to the video sequence, we account for the audio component as well by examining the dialogues. As stated earlier, we count each character's number of speech lines over the episode. Again, we can compute the HHI concentration index for dialogues and the individual share of each character over the total number of speech lines. Again, we redefine the HHI in this context as follows:

$$HHI = \sum_{i=1}^{n_c} \left(\frac{s_i}{\sum_{i=1}^{n_c} s_i} \right)^2,$$

where s_i is the number of speech lines of character i in the episode.

Though some of those features could be retrieved automatically (e.g. from parsing the video or a script, as proposed, e.g., in Zhao et al. (2007)), we have opted for the manual annotation of each episode since this approach appears more reliable than automatic scene video segmentation.

The full list of structural dimensions that we have employed comprises the following (all are computed separately for each episode):

- No. of locations;
- Rotation Location Index;
- Concentration index of locations;
- Concentration index of visual presence of characters;
- Concentration index of dialogues;
- Video share of each character;
- Dialogue share of each character.

4. RESULTS

In this section, we show the results obtained for the whole series. We have examined all the five seasons, whose composition is reported in Table 1. In the following subsections, we consider separately the results for locations (in Section 4.1, concentration phenomena among characters (in Section 4.2), and the presence of prominent individual characters (in Section 4.3).

4.1. Locations

As to the number of locations employed in each episode, we see in Figure 1 that the number oscillates in the (5,21) range. There is a wide variety of choices in the episodes, with no specific pattern emerging.

Season	No. of episodes
1	17
2	13
3	13
4	13
5	16

TABLE 1: COMPOSITION OF BREAKING BAD SEASONS

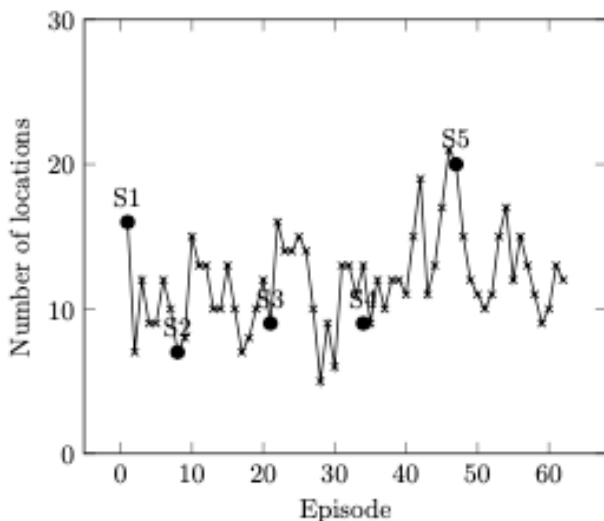


FIG.1. NUMBER OF LOCATIONS

However, not all locations are employed equally. In Figure 2, we report the HHI values for the locations, according to Equation 1. In the same picture we also draw the minimum theoretical value of HHI, i.e., that would occur if we had a perfectly balanced presence of the locations involved (e.g., three locations sharing equally the video time). We see that the episodes mostly exhibit an HHI well over the minimum dictated by the number of locations. In some episodes (namely, S1E3, S3E8, and S3E10), we even observe an exceptionally large HHI value (exceeding 0.5, which would correspond to a balanced duopoly), meaning one location is taking place nearly all the time. That location is Jesse's house in episode 3 of Season 1 ("... And the Bag's in the River"), the hospital in episode 8 of Season 3 ("I See You"), and the lab in episode 10 of Season 3 ("Fly"). By themselves, they account respectively for 78%, 74%, and 88% of the overall episode duration. On the other hand, the HHI is very close to its theoretical minimum (as we can check by observing when the two curves in Figure 2 nearly touch each other) in episodes 5 and 8 of Season 2 ("Breakage" and "Better Call Saul"), episode 9 of Season 4 ("Bug"), and episode 2 of Season 5 ("Madrigal"). In particular, in "Madrigal", Walt's house, the cafeteria where Lydia and Walt meet, and the interrogation room at DEA are the most employed locations but together grab just over one-third of the overall episode time.

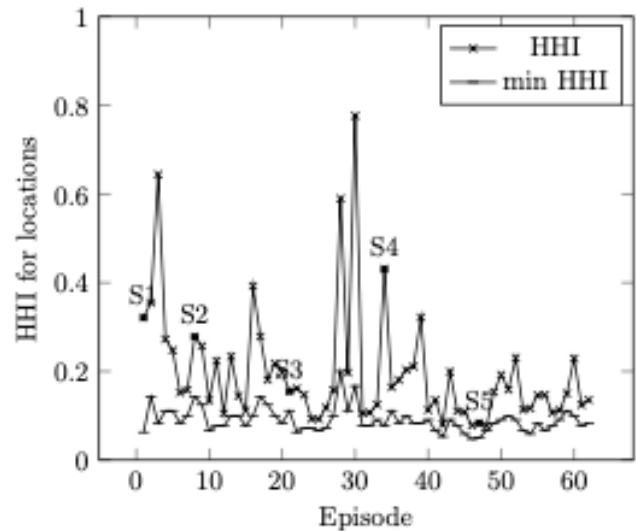


FIG. 2. HHI FOR LOCATIONS

In order to examine the reuse of locations, we can turn to Figure 3 (which shows the number of scenes) and Figure 4, where we have plotted the Location Rotation Index. However, no specific pattern emerges. Some episodes show an RLI around 0.2 (each location is employed five times on average), but an equally large number of episodes exhibit an RLI in excess of 0.6 or even 0.8 (each location appears slightly more than once on average and quite less than twice).

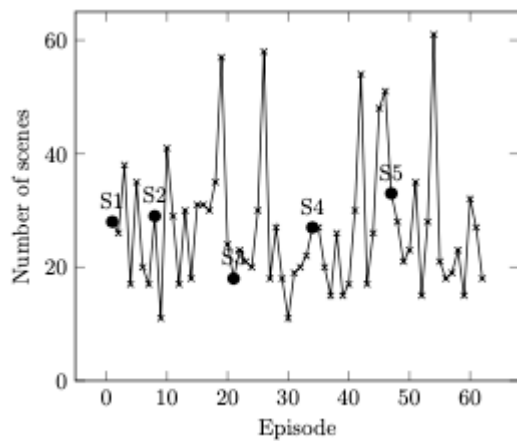


FIG. 3. NUMBER OF SCENES

Some locations are particularly relevant. In Figure 5 we have plotted the top locations by their video presence, both in terms of their overall minute count and the number of episodes where they appear. We see that Walt's house clearly stands out, and there is a roughly linear relationship between the overall minutes of presence and the number of episodes.

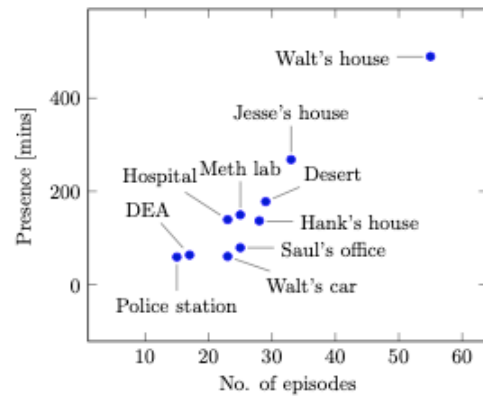


FIG. 5. TOP LOCATIONS

We can also observe the evolution of some of these locations over time. In particular, we plot the overall video presence of three important locations: Walt's house (in figure 6), the labs (in Figure 7), and the desert (in Figure 8).

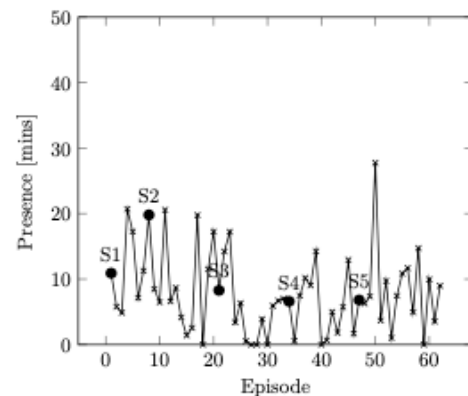


FIG. 6. PRESENCE OF WALT'S HOUSE OVER TIME

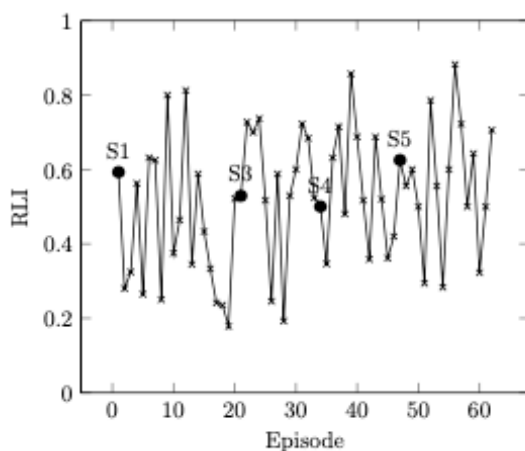


FIG. 4. LOCATION ROTATION INDEX

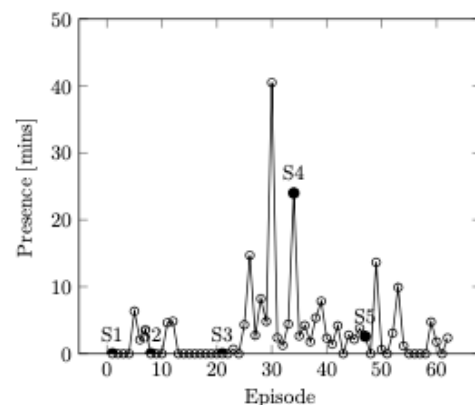


FIG. 7. PRESENCE OF LABS OVER TIME

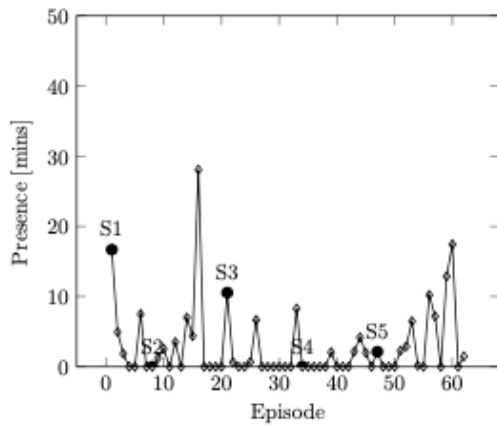


FIG. 8. PRESENCE OF DESERT OVER TIME

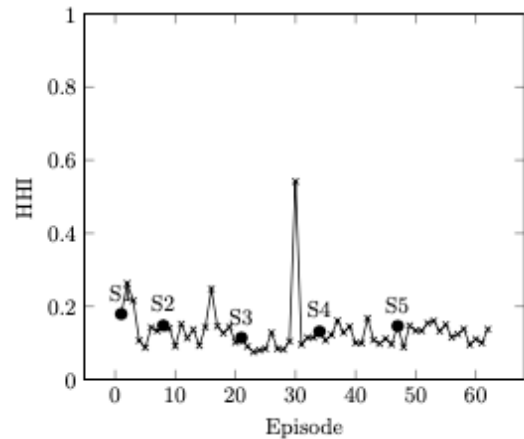


FIG. 9. HHI FOR CHARACTERS (VIDEO)

4.2. Concentration phenomena for characters

We can now examine the appearance of concentration phenomena in characters. We examine the concentration index for video presence and dialogues separately.

In Figure 9, we see that the concentration over time stays quite stable. For most episodes, it lies in the 0.1-0.2 range, which signals a moderate concentration (Laine, 1995). However, we notice occasional peaks beyond 0.2 and a single extremely large peak nearing 0.6, marking a very high concentration. The lowest peaks occur in episode 2 of Season 1 ("Cat's in the Bag...") and episode 9 of Season 2 ("4 Days Out"). In episode S1E2, Walt, Jesse, and Skyler take nearly the whole stage, with shares of 42.4%, 23.4%, and 18.2%, respectively, for a total of 84%. In S2E9, it is just the couple Walt-Jesse who dominate the episode; however, their relationship is much more balanced since Jesse gets 30% and is a close runner-up to Walt, who gets 38%. That duopoly completely fills episode 10 of Season 3 ("Fly"), for which we had already observed the dominance of the lab among locations in Section 4.1. The HHI achieves the all-time peak of 0.542.

Walt and Jesse share the scene again, with a joint share of 99%. However, Walt is the largely dominant character in their relationship with 65% of video share. The same pattern may be observed for dialogues in Figure 10, with peaks occurring in the same episodes as seen for the video presence.

The dwelling of the HHI in a specific region of their value space can be better observed if we plot the locus of HHI values, i.e., the trajectory made by the couple of concentration indices (HHI for video presence of characters and the HHI for dialogues) as time goes by. In Figure 11, we see that

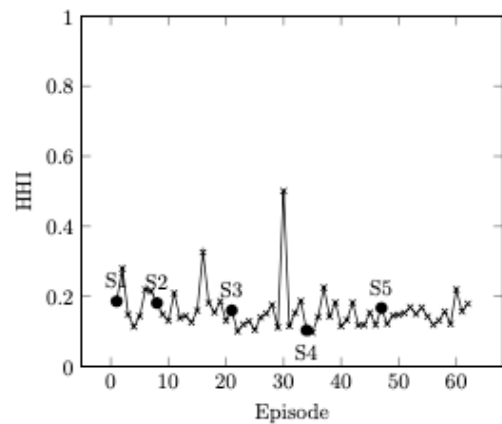


FIG.10. HHI FOR CHARACTERS (DIALOGUES)

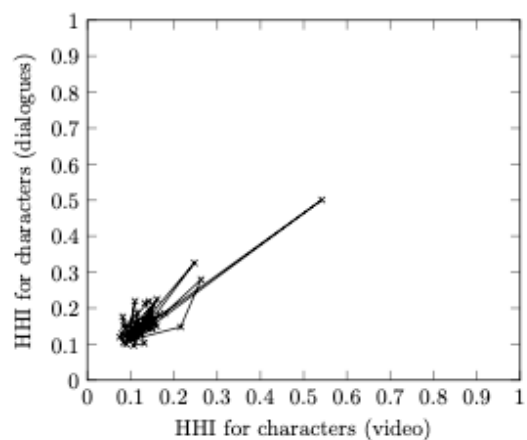


FIG. 11. HHI LOCUS FOR CHARACTERS

the near totality of episodes lies in the square marked by 0.1 and 0.2, with a thickening around the bisector, which means that the two HHI values are well correlated, with little chances of characters being present on the scene but mute. The escapes from that square are the episodes we have already mentioned, where both HHI values grow largely beyond 0.2.

4.3. Individual characters

We can now examine the individual role of the most significant characters in the series. We focused on five characters: Jesse, Skyler, Hank, Saul, and Gus. The choice of Jesse and Saul was due to them being the subject of a separate narrative paratext (the movie for Jesse and the spin-off series for Saul). The choice of the other three was due to the role they play within the narrative. Skyler is the wife of the protagonist, the adult in the family who makes important decisions and, above all, makes them in place of the protagonist (which is why we have counted neither Walt Jr. nor, of course, the newborn child). Hank, her brother-in-law, a DEA agent, represents the obstacle to the criminal life that the protagonist undertakes, the Law, which Walt breaks more and more violently. Finally, we chose Gus because he is Walt's true great antagonist (Sepinwall, 2013: 203).

In Figure 12, we report the results for Walt. His presence is continuous through the seasons, ranging from slightly below 20% to peaks that may reach 50-60%. However, we also notice a slight decaying trend over time.

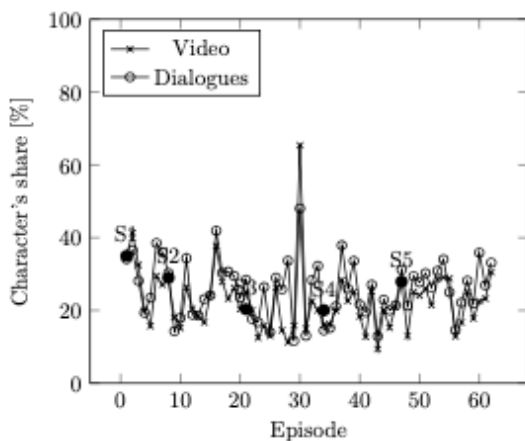


FIG. 12. WALT'S PRESENCE

The same chart for Jesse in Figure 13 reveals lower values than Walt's. Though achieving percentages often around 20%, Jesse cannot boast the same consistency. He exhibits a

fluctuating start in Season 1, appearing marginally in episode 5 ("Gray Matter") and speaking little in episode 3 ("...And the bag's in the river"). His activity stabilizes in Season 2, where his presence goes slightly up and down 20%. His contribution falls significantly in Season 3, except the peak in episode 10 of that season ("Salud"), where he shares the screen fairly equally with Walt for the whole duration of the episode, achieving a 52% share. His presence in Season 4 is wildly oscillating, with peaks even over 20% but lows in episodes 3 and 11 ("Open House" and "Crawl space", respectively).

Devoid of peaks over 20% is instead the presence of Skyler (see Figure 14), which lies in the 10-15% range most of the time. She is, of course, absent from one episode ("Salud") that we have already mentioned, where Walt and Jesse entirely dominate video and dialogues.

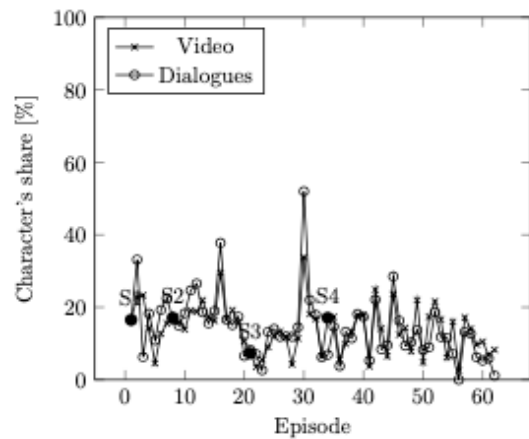


FIG. 13. JESSE'S PRESENCE

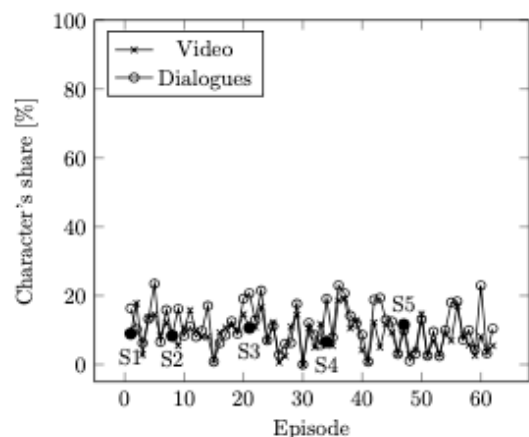


FIG. 14. SKYLER'S PRESENCE

We can observe a similar pattern for Hank in Figure 15, with a presence around 10% in most episodes. However, his presence is not as continuous as Skyler's. He is absent from episode 2 in Season 1 ("Cat's in the Bag..."), episodes 4, 6, and 11 in Season 2 ("Down", "Peakaboo", and "Mandala"), episodes 10 and 13 in Season 3 ("Fly" and "Full Measure"), and episodes 6 and 10 in Season 4 ("Cornered" and "Salud").

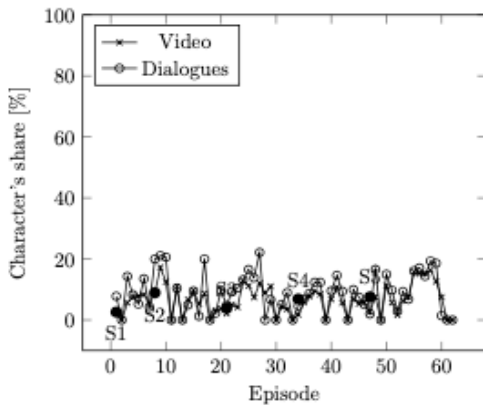


FIG. 15. HANK'S PRESENCE

The presence of Gus is instead limited to Seasons 3 and 4, as can be seen in Figure 16. It is a discreet presence, with shares well below 10% in most episodes. Also, he does not appear at all in some episodes, namely episodes 3 and 10 in Season 3 ("I.F.T." and "Fly") and episodes 2, 3, and 9 in Season 4 ("Thirty-Eight Snub", "Open House", and "Bug"). However, he occasionally plays a major role, especially in episode 8 of Season 4 ("Hermanos"), where he attains a share of 23% in the dialogues.

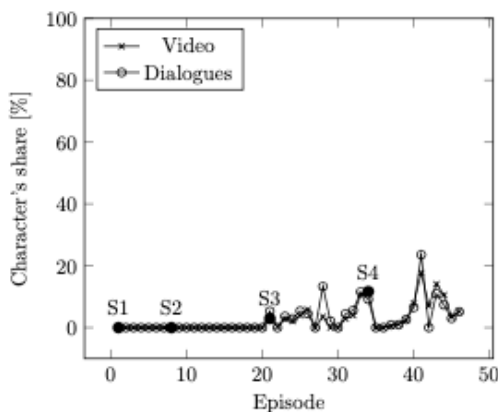


FIG. 16. GUS' PRESENCE

Finally, we consider Saul in Figure 17, who appears later in the series like Gus, but achieves a prominent presence in his very first episode (episode 8 of Season 2, aptly named "Better Call Saul"). After that initial peak, his appearances are discontinuous, with total absence in episodes 10 and 13 of Season 2 ("Over" and "ABQ"); episodes 1, 8, and 10 of Season 3 ("No M's", "I See You", and "Fly"); episodes 2, 6, and 9 of Season 4 ("Thirty-Eight Snub", "Cornered", and "Bug"), which partially coincide with the absences of Gus. When present, Saul gets a marginal share of the order of some percentage point.

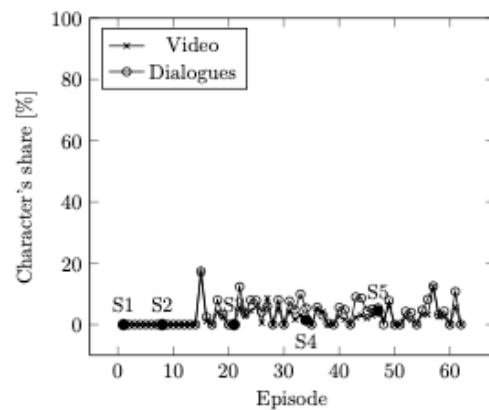


FIG. 17. SAUL'S PRESENCE

5. DISCUSSION AND CONCLUSIONS

The goal we set ourselves at the beginning of this analysis was to delineate a TV series' stylistic signature by analysing its narrative's structural dimensions. Our point of view examined the narrative ecosystem of BB in its endogenous elements, not considering the exogenous ones. Our approach is different from that suggested in other analyses on the narrative structures of TV series, which have explicitly considered the influence of production factors and the interaction with the fans on the narrative ecosystem (Pescatore and Rocchi, 2018: 229-244).

The data we have examined lead us to define BB as a highly concentrated narrative ecosystem: a polarised model that focuses on a few protagonists, where the initial narrative choices stay throughout the series. We can classify it as a stabilising selection ecosystem, where all diversity is diminished, and each element stabilises on one trait, the strongest one (Pescatore and Rocchi, 2018: 237-238). In the following, we organize our discussion around the four research questions we formulated in the Introduction.

We start with RQ1 and RQ2, concerning the possible dominance by some characters and their evolution over time. BB's strongest element is naturally its protagonist Walt, whose dominating presence we have shown in Figure 12: the peaks of presence, persistence and constancy are his, both in terms of on-screen presence and dialogue, while the other characters merely act as outlines to delineate the trajectory of his actions. That is, they are functional to the psychological evolution of the protagonist. The presence of the other characters never reaches Walt's peaks. Jesse (see Figure 13) sometimes exhibits a high percentage, which, however, is not steady throughout the episodes. When they appear together, Walt is the largely dominant character in their relationship, with 65% of the video share.

Skyler's presence (see Figure 14) is less frequent than that of her husband and Jesse. The quantitative analysis confirms that she does not have the same specific weight as our protagonist. However, both share peaks mainly concerning the dialogue sphere. When they are on the screen, they play a fundamental role in the conversation. That specific weight shapes their role as detonators of our protagonist's reflections and actions.

The same discourse can be applied to Hank (see Figure 15) and Saul (see Figure 17): both exhibit low percentages of video presence, but the peaks concern the dialogues. They too, therefore, are subjects that detonate Walt's inner and outer actions.

Gus' case is somewhat different (see Figure 16): he exhibits low but constant percentages and does not dominate the dialogues. His understating presence reflects his character, which was delineated as a man of few words from the outset, representing a sort of a shadow of the protagonist, a presence looming over him. As it has been written, Gus is a kindred spirit of Walt, a criminal in whom Walt recognises himself, admires and fears, and would like to resemble (Sepinwall, 2013: 203). A kind of phantasmal projection, then, a silent but ever-present image in the background.

On Skyler, it must also be said that the lack of presence and the psychological characterisation considered by many to be stereotypical and macho, has aroused contrasting opinions. On the one hand, it attracted the hatred of the viewers (she is considered the most hated character in the TV series). On the other hand, it spurred a series of criticisms regarding the sexism and misogyny of the BB universe (Checcaglini, 2018 ebook: 1109-1191). However, we must recall that, as in *The Sopranos* and other series that focus on difficult men, women play a marginal role and almost always get in the way of the trajec-

tories undertaken by our anti-heroes for whom, of course, the audience takes sides, albeit contradictorily (Martin, 2018: 362).

We can now turn to RQ3 and RQ4. As far as locations are concerned, no polarisation emerges as strongly as those concerning characters. We have more than a score of locations (see Figure 1), which change frequently during each episode (see Figure 4). The scene changes range between just under 20 and almost 60 (see Figure 3). No pattern of concentration emerges, so we can safely state that we are dealing with a TV series close to the action genre, which, by its nature, envisages frequent location changes and a certain dynamism. The only exceptions concern episodes constrained by forced narrative or production choices. Episode 8 of season 3, for instance, is dominated by the hospital because Hank has been injured, and the entire episode sees Walt and the other characters waiting for him to wake up. While episode 11 of season 3 is a stand-alone, with only Jesse and Walt present throughout the episode and filmed in only one location, the meth lab, because Gilligan could not film in other locations due to budget problems.

Apart from these anomalies, a fragmented pattern of locations emerges that makes us realise how our protagonist is always on the move as if BB were a sort of road movie of the soul: we follow Walt in his exterior and interior trajectories.

Of all the places he travels through, however, four recur most often in the five seasons: Walt's house, Jesse's house, the desert and the various methamphetamine laboratories (see Figure 5). Logically, these are the spaces where our protagonist, the fulcrum of the fictional universe, moves most. Nevertheless, these spaces are not simply places of transit for Walt's actions, subordinate to his progress, but are dense with symbolic meanings. A study on the poetics of spaces in BB highlights how these are emblematic of the metamorphosis performed by the protagonist: a banal family man who turns into the criminal mastermind of the drug cartel (Martin, 2015: 151-158). This radical mutation is underlined by the passage from the safe space of the family home to the dangerous and violent space of the desert and finally to the aseptic, cold and calculating space of the laboratory, which becomes more and more refined (we pass from an improvised camper to the highly efficient machine built on Gus's property). Mr Chips becomes Scarface, as has already been written, moving physically and psychologically in this triangle of places. We can therefore restrict our attention to the locations more tightly related to Walt's evolution, i.e., his house, the starting point, the labs where his transformation takes place, and the desert as a symbolic image of his character.

If we look at the graphs on the presence of these three places, we can see that Walt's house is constantly present in the minute-length of the whole series with high average values (see Figure 6). The desert has less continuity but a series of peaks, as do the various laboratories. Thus, the house is a stop-over location, while the other two are more transit locations. A transit, however, that does not leave its protagonist unscathed. If we return to the study devoted to spaces in BB, it is stated there that, as the protagonist embarks on his criminal path, thus immersing himself in the laboratories and the desert (where the fixed or mobile laboratories are often located, the first laboratory being a camper van), the space of the house also changes: over the course of the seasons we witness its slow but inexorable disintegration (Martin, 2015: 156). As in *The Portrait of Dorian Gray*, Walt remains the same (indeed, at some stage the cancer is even receding), but his moral devastation, his selling out to the money/power/violence triad, his loss of soul, is manifested in the house, which, like Dorian's canvas, mercilessly takes on all his inner rot.

From all these considerations, we can see that the narrative core of BB centres on a few clear elements (mainly characters, but also some recurring places), which determine long-term stability that does not foresee major upheavals. We could call it a solar narrative system: where Walt is the largest planet that illuminates all the others and holds them together by its gravitational force. Next to him are large planets, which in turn have other orbits, but which only make sense as a function of the central Sun. This strongly constraining structure means that, for instance, where certain characters meet with fan acclaim, their presence/importance does not change within the canonical narrative of the episodes, but rather a kind of narrative extroversion is preferred.

We refer, in this regard, to the characters of Jesse and especially Saul. About the former, who should not have survived even at the end of the first series, as Gilligan has recounted several times (Sepinwall, 2013: 197). His success with the public has allowed the film *El camino* to be dedicated to him, revealing what happens to him after the fifth season finale.

Saul, on the other hand, even became the protagonist of a very successful spin-off (*Better Call Saul*, 2015-), where we go back in time and find out how he became the character we knew in BB. We know that Saul arrived in the fictional universe of BB during the second season. At the beginning, as we can see from the graph dedicated to him (see Figure 17), his presence was felt, reaching a peak of 20%, like a kind of jolt in BB's polarised balanced universe. Afterwards, his presence then settled just below this value, staying on the low side, not

gaining more space, thus levelling off at the substantial equilibrium of BB's narratively polarised ecosystem. However, given the popularity that his character increasingly gained with the public, the authors decided to dedicate a series to him, making him the center of the narrative. The detour granted by the spin-off made it possible, on the one hand, not to betray BB's narrative coherence and, on the other hand, to meet the needs of fans and their demands.

That consistency of narration makes us realise that Gilligan's initial idea in BB always stood firm and binding: he had a narrative model in mind and kept it consistent throughout the seasons. At the same time, however, knowing that one of the characteristics of the narrative ecosystems of contemporary TV series must also be that of being able to converse and react to the expectations/requests of the audience, he satisfies the fans by externalising their desires with other spin-off series and related paratexts.

This makes BB a very different series from the model of *Grey's Anatomy* (2005-), for example, where we see an increase/decrease of characters instead, a continuous variation and oscillation of the narrative. BB, like *The Sopranos* or *House* (2004-2012), perhaps because of their series-romance structure, as we defined it earlier, presents us with a polarised, highly concentrated narrative model. In contrast to BB's coherence, *Grey's* model could be described as low concentration, a dispersed model where the balance is provided by the narrative instability of the characters, despite its strong polarisation on locations (taking place practically always within the hospital). For this reason, it has been defined as a directional selection model (Pescatore and Rocchi, 2018: 238-239).

Thus, the BB model proposes a high concentration of a single character but dynamic location choices. *Grey's Anatomy* model, on the contrary, disperses the protagonists and concentrates on a location. As if in order to maintain the right narrative appeal of a TV series, one had to balance polarisation and dispersion: where the narration polarises on one element of the story (place or character), it is necessary to balance it with the dynamism of the other (places or characters, precisely), so that the narrative fabric never loses the viewers' attention.

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- Breaking Bad* (2008-2013)
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Grey's anatomy (2005-)
The Sopranos (1999-2007)
The X-Files (1993-2002)

