# Creativity and television drama: A corpus-based multimodal analysis of pattern-reforming creativity in House M.D.

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## Abstract

Carters (2004) theory of creativity in everyday common talk is by far the most influential in the field. He hypothesizes that linguistic creativity can be categorised into pattern-forming and pattern-reforming creativity. Television drama, despite receiving global popularity, receives little attention from the field of linguistics. This paper aims to explore the 'common ground' in television drama dialogue and linguistic creativity through deciphering how pattern-reforming creativity is realised through screenplay, telecinematography and acting as meaning-making strategies. Using dialogues from TV medical dramedy House M.D., a corpus was created to facilitate the extraction of pattern-reforming creativity such as neologisms, portmanteaus and slang words. The extracted data was then analysed using a corpus linguistic approach to multimodal discourse analysis. The analysis reveals a strong association of pattern-reforming creativity production with actor's facial performance realised interpersonally by certain types of telecinematic resources such as visual framing, camera angle, camera movement and proxemics. This research is a pioneering effort in linking up linguistic creativity with multimodality as well as a positive driving force towards research in teledramatic discourse.

**Keywords**: creativity; House M.D., TV drama; pattern-reforming; corpus; multimodality;

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## 1. Introduction

*"Read less, more TV." – House M.D.*

Linguistic creativity in teledramatic discourse is an aspect of language studies that is relatively unexplored. Ever since the study of linguistic creativity was officially academised in the 1920s (Pope, 2005; Vo and Carter, 2010), the focus has largely remained on the 'literariness' in poetry and literature (Vo and Carter, 2010), thus in its written form rather than spoken, and rarely on the language and language use (Carter, 2004). The latter half of the twentieth century saw a growing interest in creative language studies as research coverage expanded to non-literary texts (Vo and Carter, 2010), such as creativity in spoken discourse (Carter and McCarthy, 1999; Carter, 2004), advertising (Carter, 1999; Carter and McCarthy, 2004; Sasser and Koslow, 2008; West, Kover and Caruana, 2008), newspaper headlines (Moeran, 1984; Myers, 1994; Cook, 2002; Carter and McCarthy, 2004) and jokes (Chiaro, 1992; Carter and McCarthy, 2004). Yet, few have attempted to put forth a detailed study on linguistic creativity in television drama as a form of literary arts, or within its dialogue as a form of non-literary written text. Even as the global popularity of television drama drew over 3000 non-linguistic journal articles on television studies between 1995 and 2004 (Allen, 2004; Bednarek, 2010), teledramatic discourse – or the language of popular culture in general – has not been taken seriously by linguists or educators (Pennycook, 2007; Bednarek, 2010; Androutsopoulos, 2012; Norton and Vanderheyden, 2004). Bignell and Lacey (2005: 3) describe television drama as "a genre…equally as popular and devalued in contrast to literature or cinema".

In fact, the teledramatic discourse has several noticeable benefits which make it highly suitable for research, namely the size

of text, longitudinality and multimodality. When compared with a film, an individual TV drama series contains a larger number of texts arranged in episodic sequence, which offers more data for the analysis of longitudinal language patterns. When compared with literature, a TV drama offers the opportunity for multimodal analysis. In addition, when compared with spoken language, teledramatic discourse "might be even more likely than Carter's *everyday* [creative] language to escape critical attention" (Richardson, 2010: 194). Therefore, teledramatic discourse deserves far greater attention from researchers than it currently does.

Richardson suggests that *House M.D.* can be an instance which bridges linguistic creativity and teledramatic discourse:

> On the formal side, a possibility exists that dramatic dialogue, approached in the right way, might provide access to patterns of language behavior not (yet) discovered or fully explored in naturally occurring spontaneous interaction – might, indeed, be manifesting its creativity by expressively displaying those patterns. The *fake banter* exchanges in *House* are an instance of this.
>
> (Richardson, 2010: 194-195)

This article proposes a corpus linguistic approach to multimodal analysis of Carter's (2004)  pattern-reforming creativity, namely the analysis of neologism, portmanteau and slang word, in the medical TV dramedy *House M.D.*.

## 2.  Data and Methodology

In order to facilitate the reading of this paper, there are seven steps involved in the preparation stage: 1) defining linguistic creativity, 2) justifying the data source, 3) creating the *House M.D.* Corpus (HMDC), 4) selecting the reference corpus, 5) using hapax

legomena as sources of pattern-reforming creativity, 6) extracting pattern-reforming creativity from HMDC, and 7) performing multimodal transcriptions on the relevant video frames.

## 2.1  Defining Linguistic Creativity

Carter (2004: 9) views creative language use as "a marked breaking or bending of rules and norms of language, including a deliberate play with its forms and its potential for meaning." Based on the findings in the CANCODE corpus of spoken English, he proposes a linguistic creativity hypothesis in all common talk by emphasising two types of creativity – pattern-reforming and pattern-forming creativity. The former refers to "creativity by displacement of fixedness, reforming and reshaping patterns of language" while the latter refers to "creativity via conformity to language rules rather than breaking them, creating convergence, symmetry and greater mutuality between interlocutors" (Vo and Carter, 2010: 303). The former type is the focus of this paper.

Three forms of pattern-reforming creativity are studied: neologism, portmanteau and slang. Neologism, "(from Greek νέος, new, and λόγος, a word)", is conventionally defined as "a new word or phrase, or new use of a word; in fact, every innovation in a language, after it has been a classical epoch." (Bradford and Wigglesworth, 1851: 198). This paper will focus on new words in the neologism category. Examples are 'Uddy', 'Houseland' and 'us'es'.

Portmanteau was originally defined by English writer Lewis Carroll in his book *Through the Looking-Glass* (1871) as a word which has "two meanings packed up into one word." It involves a blending of words from the existing lexicon through various lexical and morphological methods to generate new lexeme (Gries, 2004), therefore, the creativity is pattern-reforming. In this paper, portmanteau takes on Carroll's definition as a form of meaning-making strategy rather than the highly technical classifications from morphological analysis by Algeo (1977), Crystal (2008) and Gries (2004). Therefore, 'morphological creativity', a term coined by

Carter and McCarthy (1995) which refers to the derivation of new word from existing words and morphemes such as adding '-y' suffix to 'crawl' to form 'crawly' (Carter, 2004: 98), is included in the definition of portmanteau in this study. Examples are 'Cathlympics', 'defibrillist' and 'decrappinated'.

Slang is commonly defined as a variety of a language which consists of words or phrases that are considered non-standard when used in a formal setting (Wentworth and Flexner, 1960; Dumas and Lighter, 1978), with a general purpose of promoting in-group solidarity (Adams, 2009; Allan and Burridge, 2016). According to Dumas and Lighter (1978: 12), slang is "used deliberately, in jest or in earnest, to flout a conventional social or semantic norm", which places slang in the category of pattern-reforming creativity. Examples are 'bikkies', 'darnit' and 'coited'.

These linguistic forms are not by any means discrete or mutually exclusive from one another. Olesen and Whittaker (1968: 222) describe slang in a way that resembles the definition of neologism by Bradford and Wigglesworth (1851) as cited earlier:

> A central attribute of slang, most writers agree, is the rapidly changing character of those new words, old words with new meanings, and half words that come to be thought of as belonging to this category of language.

The example of morphological creativity 'crawly' also shows that a portmanteau can simultaneously be a neologism and slang (Carter, 2004). Owing to this, the word will be placed into the category of portmanteau before neologism or slang.

As Carter's (2004) hypothesis is applicable to both spoken and written discourse (Vo and Carter, 2010), it can be mapped onto teledramatic discourse in both the spoken form (performed by actors as "mediated" "represented talk") (Richardson, 2010: 177) and written form (as written texts on scripts) (Vo and Carter, 2010). Furthermore, since linguistic creativity can be realised through non-verbal channels such as visual and somatic ones (Finnegan, 2002;

Carter, 2004; Carter and McCarthy, 2004), a multimodal analysis approach is adopted.

## 2.2  Justifying the Data Source

*House M.D.*is an American television medical 'dramedy' spanning eight seasons with a total of 177 episodes aired on the FOX Network from 16th November 2004 (ABC Medianet, 2004) to 21st May 2012 (TV By The Numbers, 2012). The series is based on the premise (which is also the title of the pilot), "Everybody lies" (Werts, 2009), a motto inscribed deep in the mind of Dr. Gregory House (Hugh Laurie), the main character who is inspired by Sir Arthur Conan Doyle's renowned fictional detective Sherlock Holmes (Slate, 2006).

   *House M.D.* is selected for a number of strong reasons. Firstly, it is written with creativity and language quality very much worth exploring and exploiting (Olson, 2010; Richardson, 2010). Secondly, it is a popular television program which has set 3 Guinness World Records (namely the world's most popular TV show, the world's most watched man on television and the worlds highest -paid TV actor in a drama series) (Guinness World Record News, 2012), as well as winning 2 Golden Globes, 49 awards and 112 nominations. Bignell and Lacey (2005: 6) argue that "it is television's very familiarity, and its conventional focus upon the familiar, the present time and the everyday, that opens up alternative formal and stylistic possibilities." Bednarek (2010) echoes that popularity of television and programmes alone is worthy of study due to its significant impact on our daily lives and societies. These world records and arguments make *House M.D.* a worthy candidate for this study. Thirdly, the main character Dr. Gregory House has been the inspiration for many publications from medical science (Sanders, 2009; Holtz, 2006; 2011), medical humanities (Goodier and Arrington, 2007), philosophy (Jacoby and Irwin, 2008), psychology (Clyman, 2009; Jamieson, 2011; Cascio and Martin, 2011; Whitbourne, 2012; Li and Csikszentmihalyi, 2014) and media studies (Jackman and Laurie, 2010; Holtz, 2011; Hockley and Gardner, 2011), thereby playing a critical role in the construction of

popular memory (Bignell and Lacey, 2005) and in academia. A linguistic study of House's creativity will bridge the existing work on House from the aforementioned disciplines. Lastly, *House M.D.* is a unique creative instance in the modern television history of medical dramedy (Li and Csikszentmihalyi, 2014). It is built around one single central character, providing longitudinality in the creativeness of its repertoire and subsequently, an opportunity for the studies of creative language use to expand beyond the written form and into the scripted spoken counterpart.

## 2.3  Creating the HMDC

HMDC uses fan scripts – the actual transcripts from television produced by multiple 'fans' (Bednarek, 2010) – as the input data. The construction of the HMDC involves three major steps. Step one is the data collection of *House M.D.* fan scripts of every episode from the internet (therefore not the original screenwriters' scripts). While fan scripts are not 100% accurate, they are selected for a number of reasons. Firstly, the finalised original scripts are inaccessible to the public. Secondly, as Bednarek (2010: 70) points out, fan scripts are "much more accurate than subtitles (which could be automatically extracted as alternative data source), with a much greater number of and more significant mistakes in the subtitles than in the transcripts." Lastly, "[m]anual transcription by the researcher may in fact result in similar inaccuracies as are present in the fan transcripts (e.g. typos), and simply was not feasible for a large-scale corpus analysis" (Bednarek, 2010: 70). Since the *House M.D.* fan scripts used in this study are available online and have been 'peer reviewed' by other their readers – in which corrections are continuously suggested and made by the fan script readers (clinic_duty, 2007) – I have decided to adapt the fan scripts and improve their accuracies. Step two is the removal of all non-dialogue elements such as fade-ins, scene headings, action sequences, scene transitions, mood brackets, parentheticals, commercial tags and character name tags. Once the non-dialogue elements are removed, the 'pure' dialogues are stored as txt-format in 177 individual files

(one file per episode) to form a raw, unscripted and unannotated version of HMDC. Step three is to improve accuracy of the transcribed dialogues in the HMDC. Every line has been manually checked against the actual lines performed by the actors in the television series after watching all episodes at least eight times. Further spell checks are performed repeatedly throughout four years of this study whenever possible and necessary. This longitudinal effort has helped to reduce the corpus impurities and improve accuracy of future calculations. The result is a 927,922-word cleaned HMDC.

## 2.4 Selecting the Reference Corpus

In the extraction of linguistic creativity, the choice of reference corpus is a determining factor. COCA is selected as the reference corpus for a number of key reasons:

1. Since *House M.D.* is set in New Jersey, USA, and creativity is "culture-bound" (Carter, 2004: 47), only a corpus of American English is deemed appropriate.
2. The extraction of creative language from a near 1-million-word HMDC required the use of large, balanced and up-to-date corpus of American English such that it can cover a wide range of vocabulary of various genres, including those from the medical category.
3. *House M.D.* was broadcasted from November 16, 2004 to May 21, 2012. Since creativity is "time-bound" (Carter, 2004: 47), a corpus which covers this period will be best for creative language searching.
4. Since TV drama dialogues belong to a (scripted) written form of spoken language, the reference corpus should include both written and spoken data.

COCA meets all the criteria above. As "the largest freely-available corpus of English, and the only large and balanced corpus of American English" (Davies, 2008), COCA contains more than

450 million words in 189,431 texts equally divided in 5 genres: spoken, fiction, popular magazines, newspapers and academic journals, including 20 million words each year from 1990-2012 with the most recent addition of texts (Apr 2011 - Jun 2012) completed in June 2012 (Davies, 2008). The spoken part of COCA (hereafter referred to as COCA Spoken) contains 95 million words [95,385,672] of transcripts of unscripted conversation from more than 150 different TV and radio programs such as *All Things Considered* (NPR), *Newshour* (PBS), *Good Morning America* (ABC), *Today Show* (NBC), *60 Minutes* (CBS), *Hannity and Colmes* (Fox), *Jerry Springer*, etc (Davies, 2008). COCA Spoken is arguably an authentic representation of actual spoken conversation given its data is about 95% unscripted with "overwhelming" amount of discourse markers (Davies, 2008; 2014). In addition, a close examination of COCA shows that it includes interviews with medical experts. The inclusion of medical English makes COCA a suitable reference corpus for the extraction of pattern-reforming creativity from HMDC.

## 2.5 Hapax Legomena as Sources of Pattern-reforming Creativity

The extraction of pattern-reforming creativity makes use of hapax legomena as the sources. Hapax legomena are words which occur only once in a given selection of words (Zipf, 1935; Scott and Tribble, 2006; Baker, Hardie and McEnery, 2006). Despite being proposed as a measurement of expansion of morphological productivity in word formation (Verheij, 2000; Gaeta and Ricca, 2005), hapax legomena are generally investigated so that they can be excluded from statistical calculations, language teaching and language processing, mainly due to its low individual frequency count, high lexical variety (i.e. a measure of how many different words used in a text) (Nakamura, 1987; Scott and Tribble, 2006; Jurafsky and Martin, 2009; Oakes, 2009; Fan, 2010; Kondal, 2015) and high percentage of presence (44% in Lewis Carroll's *Alice's*

*Adventures in Wonderland*, 49.8% in Mark Twain's The *Adventures of Tom Sawyer*, 56.6% in 43-million-word Merc Corpus) (Baayen, 2001; Manning and Schütze, 2001; Kornai, 2002; Fan, 2010). However, it is precisely in these hapax legomena that pattern-reforming creativity such as neologisms, slang words and portmanteaus are primarily found (Baayen and Renouf, 1996; Plag, 2003). In other words, hapax legomenon is a 'creativity potential' and should therefore be welcomed, rather than excluded, in this particular analysis.

Davies (2014) argues that the extraction of neologism (including portmanteaus and slang words, since they are not mutually exclusive) requires a monitor corpus – a time-tagged corpus which monitors the changes in a language by constantly replacing old texts with new ones while comparing it to a stable reference set (Sinclair, 1982; Clear, 1987; Tognini-Bonelli, 2010). By comparing a monitor corpus with the dataset gathered in the same period of time, it will be possible to extract the neologisms of this period (Davies, 2014). Without a monitor corpus, the searching for neologisms will require looking at "all words occurring a certain number of times per ten million within a particular alphabetical stretch and comparing them to an existing wordlist" (Walter, 2010: 436). However, even with a monitor corpus such as COCA, the extraction of neologisms will still take considerable time and manual work (Walter, 2010; Davies, 2014). Since manual work is inevitable, the key questions are what filtering criteria should be applied in the extraction process of pattern-reforming creativity in order to minimise time wastage and how to maximise hit rate in the extraction. The synergy between hapax legomena and COCA will play a significant role in answering these two questions.

## 2.6  Extraction of Pattern-reforming Creativity

The extraction of pattern-reforming creativity is facilitated by WordSmith Tools, which requires a *p*-value as input and an option for whether or not words of negative keyness should be excluded. In statistical significance testing, a *p*-value is the probability of yielding

a particular result equal to or more extreme than what is actually observed, while the null hypothesis is true (Goodman, 1999). For the case of pattern-reforming creativity extraction, the *p*-value must be set to its maximum possible value allowed by WordSmith Tools. By setting Max. *p*-value to "1.", it allows any result with a *p*-value of "1." or less. In layman's terms, because a small *p*-value in WordSmith Tools will exclude the hapax legomena (and thus the pattern-reforming creativity), a maximum *p*-value will ensure their inclusion. This is an unconventional move in corpus linguistics. Conventionally, the confidence / significance level is set at 0.05 or even 0.01, but given the largest possible *p*-value generated of the keywords in a particular corpus was unknown, setting the *p*-value to the maximum is a crucial step in the extraction of pattern-reforming creativity.

As for the Keyness of a word, WordSmith Tools calculates this using a cross-tabulation of the word's frequency and the number of running words in the source wordlist with those in the reference corpus (Scott, 2014). A word is said to be positively key if it "occurs more often than would be expected by chance in comparison with the reference corpus", and negatively key if "it occurs less often than would be expected by chance in comparison with the reference corpus (Scott, 2014). By excluding the negative keywords, the list of creativity potential can be narrowed down even further. A HMDC keyword list (known as KeyWords on WordSmith Tools) is then created and yielded 9140 types.

Another key to the extraction of pattern-reforming creative language is the presence of a word in HMDC and the absence of the same word in COCA. Translating this into numbers, it means zero[2] occurrence in the reference corpus (i.e. RC. Freq. = 0). Using this criterion as filter on the list of 9140 types, the list is further narrowed down to 660 types of potential pattern-reforming

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[2] "Words which do not occur at all in the reference corpus are treated as if they occurred 5.0e-324 times (0.0000000 and loads more zeroes before a 5) in such a case." (See *How Key Words are Calculated* in Scott (2014))

creativity. These types are mostly hapax legomena (i.e. Freq. = 1), dis legomena (i.e. Freq. = 2) and tris legomena (i.e. Freq. = 3). This keyword list is then exported as a Microsoft Excel spreadsheet and undergoes manual categorisation based on the types' nature in context, as shown in Figure 1.

| | A | B | C | D | E | F | G | H | I | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | KeyWords | | | | | | | |
| 2 | | | | | | | | | | | | | |
| 3 | N | Key word | Freq | % | Texts | RC. Freq | RC. % | Keyness | P | Nature (person's name, place name, pla | | | |
| 3507 | 3012 | WEBLY | 1 | | 1 | 0 | | 12.35 | 0.00 | person's name | | | |
| 3508 | 3533 | WEGENERS | 1 | | 1 | 0 | | 12.35 | 0.00 | spelling error, corrected | | | |
| 3509 | 3253 | WEINERSCHNITZEL | 1 | | 1 | 0 | | 12.35 | 0.00 | thing name : place | | | |
| 3510 | 3255 | WERING | 1 | | 1 | 0 | | 12.35 | 0.00 | spelling error, corrected | | | |
| 3511 | 3398 | WERNICKIE | 1 | | 1 | 0 | | 12.35 | 0.00 | medical terms | | | |
| 3512 | 3074 | WHATTAGUY | 1 | | 1 | 0 | | 12.35 | 0.00 | creativity / slang | | | |
| 3513 | 3205 | WHOOAAAAII | 1 | | 1 | 0 | | 12.35 | 0.00 | exclamation | | | |
| 3514 | 1908 | WILLENBRAND | 2 | | 1 | 0 | | 24.71 | 0.00 | medical term | | | |
| 3515 | 3167 | WINDTALKER | 1 | | 1 | 0 | | 12.35 | 0.00 | thing name | | | |
| 3516 | 3109 | WIRSUNG | 1 | | 1 | 0 | | 12.35 | 0.00 | medical terms | | | |
| 3517 | 3460 | OOOOOOOOOOOOOOOOOOO | 1 | | 1 | 0 | | 12.35 | 0.00 | exclamation | | | |
| 3518 | 3265 | WORLDSSORESTKNEESISIL | 1 | | 1 | 0 | | 12.35 | 0.00 | creativity / medical term | | | |
| 3519 | 3437 | WOSOMEBODY | 1 | | 1 | 0 | | 12.35 | 0.00 | spelling error, corrected | | | |
| 3520 | 3019 | WOWHY | 1 | | 1 | 0 | | 12.35 | 0.00 | spelling error, corrected | | | |
| 3521 | 3033 | WOYOU | 1 | | 1 | 0 | | 12.35 | 0.00 | spelling error, corrected | | | |
| 3522 | 3188 | WRR | 1 | | 1 | 0 | | 12.35 | 0.00 | exclamation | | | |
| 3523 | 3104 | WUSEKUS | 1 | | 1 | 0 | | 12.35 | 0.00 | person's name | | | |
| 3524 | 3122 | XENODIAGNOSIS | 1 | | 1 | 0 | | 12.35 | 0.00 | medical terms | | | |
| 3525 | 3496 | YABOS | 1 | | 1 | 0 | | 12.35 | 0.00 | creativity / slang | | | |
| 3526 | 3025 | YEEAH | 1 | | 1 | 0 | | 12.35 | 0.00 | exclamation | | | |
| 3527 | 3057 | YEEEEESSS | 1 | | 1 | 0 | | 12.35 | 0.00 | exclamation | | | |
| 3528 | 3149 | YEMEI | 1 | | 1 | 0 | | 12.35 | 0.00 | non-English language | | | |
| 3529 | 3520 | YIMTZA | 1 | | 1 | 0 | | 12.35 | 0.00 | non-English language | | | |
| 3530 | 3199 | ZAMYLOIDOSIS | 1 | | 1 | 0 | | 12.35 | 0.00 | creativity / portmanteau / medical term | | | |
| 3531 | 964 | ZEBALUSKY | 5 | | 1 | 0 | | 61.77 | 0.00 | person's name | | | |
| 3532 | 3464 | ZNACHENNYA | 1 | | 1 | 0 | | 12.35 | 0.00 | non-English language | | | |
| 3533 | 3475 | ZNATY | 1 | | 1 | 0 | | 12.35 | 0.00 | non-English language | | | |
| 3534 | 3184 | ZUMU | 1 | | 1 | 0 | | 12.35 | 0.00 | non-English language | | | |

**Figure 1:** Categorised list of potential pattern-reforming creative lexical items

While tokens of pattern-reforming creativity such as neologisms, portmanteau and slang words are retained, otherwise tokens which belong to the following types are rejected:

- Medical terminologies (eg. disease names, medicine names)
- Proper nouns (eg. character's names, place names, thing names)
- Acronyms (eg. 'GFIS', 'MIDNIT')
- Gibberish (eg. 'teelingent' and 'valutate', by patients suffering from aphasia)
- Onomatopoeia in general context (eg. 'CAWWWW', 'BUZZZZZZ')
- Exclamations (eg. 'OOOOOOOOOOOOOOOOOO', 'YEEAH', 'YEEEEESSS')

- Unfinished words (eg. '[Don't] worr—')
- Non-English words (eg. 'Znachennya', 'Znaty', 'Zumu')

After any residual spelling errors are corrected and re-categorised, a list of 114 pattern-reforming creative types is produced. That is 17.27% of the 660 potential pattern-reforming creative types (=114 / 660) and 0.486% of the HMDC wordlist (= 114 / 23,466). These 114 creative types appear 128 times in the television drama as some of the items consist of multiple instances. At this point, these instances are ready for multimodal transcriptions.

## 2.7 Multimodal Transcription

One of the key challenges faced in multimodal analysis of video is the huge amount of semiotic resources required to be transcribed and annotated for a relatively short clip. Although advancement in technology in the last few decades have helped the development of computer-assisted multimodal recognition and analysis (Adolphs and Carter, 2007), a fully automated system capable of high speed, high accuracy in-talk multimodal encoding is yet to be invented (Knight, et al. 2008). The manual approach remains a crucial strategy for most multimodal corpus researchers despite the high time cost. However, with the help of Microsoft Excel and a transcription framework as suggested below, analysis can still be performed in a rather efficient and effective manner.

In preparation for the multimodal transcription, each instance of creative items obtained from the extraction process required the corresponding video segment to be retrieved and numbered according to the respective season (Season), episode (Episode) and time (Time Stamp). Screenshots of the video are made at the moment of creative language production (Salient Visual Frame) and are added to the Excel sheet as pictorial reference.

**Table 1:** semiotic resources considered in multimodal transcription (OHalloran et al., 2010)

| VISUAL MODE: Cinematography: | AUDITORY MODE: Soundtrack: |
|---|---|
| <ul><li>Camera Angle</li><li>Camera Movement</li><li>Visual Framing</li></ul> | <ul><li>Music, Song</li><li>Speech/Narration</li></ul> |
| SOMATIC MODE: Kinesics: | CREATIVITY: |
| <ul><li>Music, Song</li><li>Kinesic Actions:</li><li>Physical Movement in Space</li><li>Gesture</li><li>Kinesic Expression/Display:</li><li>Facial Expression</li><li>Gaze</li><li>Kinesic Orientation:</li><li>Proxemics</li><li>Stance, Posture</li></ul> | <ul><li>Instance</li><li>Pattern-forming / Pattern-reforming</li><li>Nature</li><li>Participant</li></ul> |

The framework for multimodal transcription of creative video segments is modelled from the framework proposed by O'Halloran et al. (2010), which employs multimodal social semiotics as the underlying theoretical foundation (see Table 1):

> A multimodal social semiotic approach to the study of communication offers the descriptive means to account, in both detailed and holistic views, for the multiple and innovative ways in which semiotic resources are both co- and/or cross-deployed within and across various modes of communication (i.e., visual, aural, and somatic) to fulfil certain social-semiotic functions or objectives[…]

Since linguistic creativity in TV dramas falls in the category of multimodal communication, it will be highly suitable to adopt a multimodal social semiotic approach, and thus adapting the framework by O'Halloran et al. (2010), to the study of linguistic creativity in *House M.D.*.

It is worth noting that attribute values of the above semiotic variables mostly follow the conventional terminology in film analysis. For instance, terms such as intimate space, personal space, social space, and public space of Proxemics are based on anthropologist Edward T. Hall (1966). He describes the four zones of interpersonal distances between participants:

- Intimate space – within 18 inches: a space for individual of very close relationships, often involving in intimate contacts such as embracing, whispering or touching
- Personal space – 1.5 to 4 feet: a space for individuals of close relationships, often involving interactions between family and close friends.
- Social space – 4 to 12 feet: a space for individuals who are acquaintances
- Public space – 12 to 25 feet: a space used in public speaking situations

In this paper, these spaces are used to describe the distance between the participants on-screen and the viewers.

Types of shots in Visual Framing such as close-up, medium close-up, medium shot, medium long shot and long shot are based on Thompson and Bowen (2009). More specifically, the close-up shows only the head, hands, feet or small object. The medium close-up frames the human body from the chest up. The medium shot frames the body from the waist up. The medium long shot frames the body from about the knees up. The long shot frames the entire body but the background dominates the frame. (Thompson and Bowen, 2009). Attribute values of Camera Angle (high, eye-level, waist-level, low), Camera Movement (stationary, tracking shot,

hand-held shot, walk-and-talk, tilt shot, zooming in) and Visual Framing (over-the-shoulder shot, two shot, POV shot, wide shot) are based on common terms used in film studies from academia (Thompson and Bowen, 2009; UW Bothell, 2013; Pennsylvania State University, n.d.) and film industry (Dise, 2016). These measurements are made with respect to the view of the viewer. Sample shots are provided in Table 2 Visual Framing / Camera Distance as defined by Bordwell and Thompson ([1990] 2008) ([1990] 2008).

Other attribute values under Facial Expression (such as frowns, raises eyebrows, head jerks) (see Table 3 Samples of facial expressions) and Gaze (such as at top-right corner, at character_name, forward) are classifications based upon the actual performance of the creator of pattern-reforming creativity. Therefore, the facial expressions and gaze of the target of pattern-reforming creativity are not considered and will not be recorded onto the Excel sheet. Should the facial expressions or gaze of the creator be absent, the corresponding spreadsheet cells are left empty and subsequently appear as '(blank)' in Excel PivotTables.



**Figure 2:** House's 'Cathlympics' scene with Sister Mary Eucharist in *Damned If You Do*
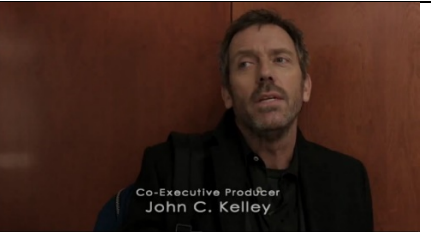
For example, Figure 2 shows a screen capture of House's 'Cathlympics' scene with Sister Mary Eucharist, an instance of creative language production extracted from HMDC. It appears in Season 1 Episode 5 *Damned If You Do* between the time 00:18:47 and 00:18:52 in the format of hh:mm:ss. The Salient Visual Frame stores the most significant frame of the drama at the moment of creative language production. In this instance, under *VISUAL MODE: Cinematography*, *Camera Angle* is at the eye-level, *Camera Movement* is stationary, *Visual Framing* is a combination of close-up shot and over-the-shoulder shot, or more precisely, over the shoulders of Sister Mary Eucharist (see Table 2 for samples of visual framing). Under *AUDITORY MODE: Soundtrack*, *Music, Song* are absent, *Speech / Narration* is House saying to Sister Mary Eucharist, "Do you people keep records of these things? Is there a 'Cathlympics'?"

Under *SOMATIC MODE: Kinesics*, *Kinesic Actions: Physical Movement in Space* for both House and Sister Mary Eucharist are stationary and *Gesture* is absent; *Kinesic Expression/Display: Facial Expression* is only visible for House, as he raises his eyebrows and offers a big-eye stare at Sister Mary Eucharist (see Table 3 Samples of facial expressions); the frame shows the two participants sitting down and the use of framing within personal space, therefore, *Kinesic Orientation: Proxemics* is personal space and *Stance, Posture* is sitting. In terms of *CREATIVITY*, *Instance* is 'cathlympics' belonging to the *pattern-reforming* category, *Nature* is portmanteau – a combination of 'Catholic' and 'Olympics', and the *Participant* in this instance of creativity production is House. Sister Mary Eucharist has not participated in the generating of the portmanteau and therefore is not considered as a creator in this creativity production.

Table 2 Visual Framing / Camera Distance as defined by Bordwell and Thompson ([1990] 2008)

| | | |
|---|---|---|
|  Extreme close-up |  Close-up |  Medium close-up |
|  Medium shot, Over-The-Shoulder shot |  Medium long shot, Over-The-Shoulder |  Long shot, Over-The-Shoulder shot |
|  Extreme long shot |  POV shot |  Two shot |

Table 3 Samples of facial expressions

| | | |
|---|---|---|
|  raises eyebrows, big-eye stare |  directed stare |  closes eyes |
|  lower jaw protrudes |  normal |  frowns |
|  concerned |  head jerks |  (blank) (no visible facial expressions) |

Multimodal transcription is performed on every instance produced by the extraction process and is then analysed in the following section.

## 3. Analysis

### 3.1 Distribution of Pattern-reforming Creativity

After all instances of pattern-reforming creativity have been transcribed and inputted into the multimodal transcription Excel sheet, the data is analysed quantitatively using a combination of tables and charts that come with Excel by default.
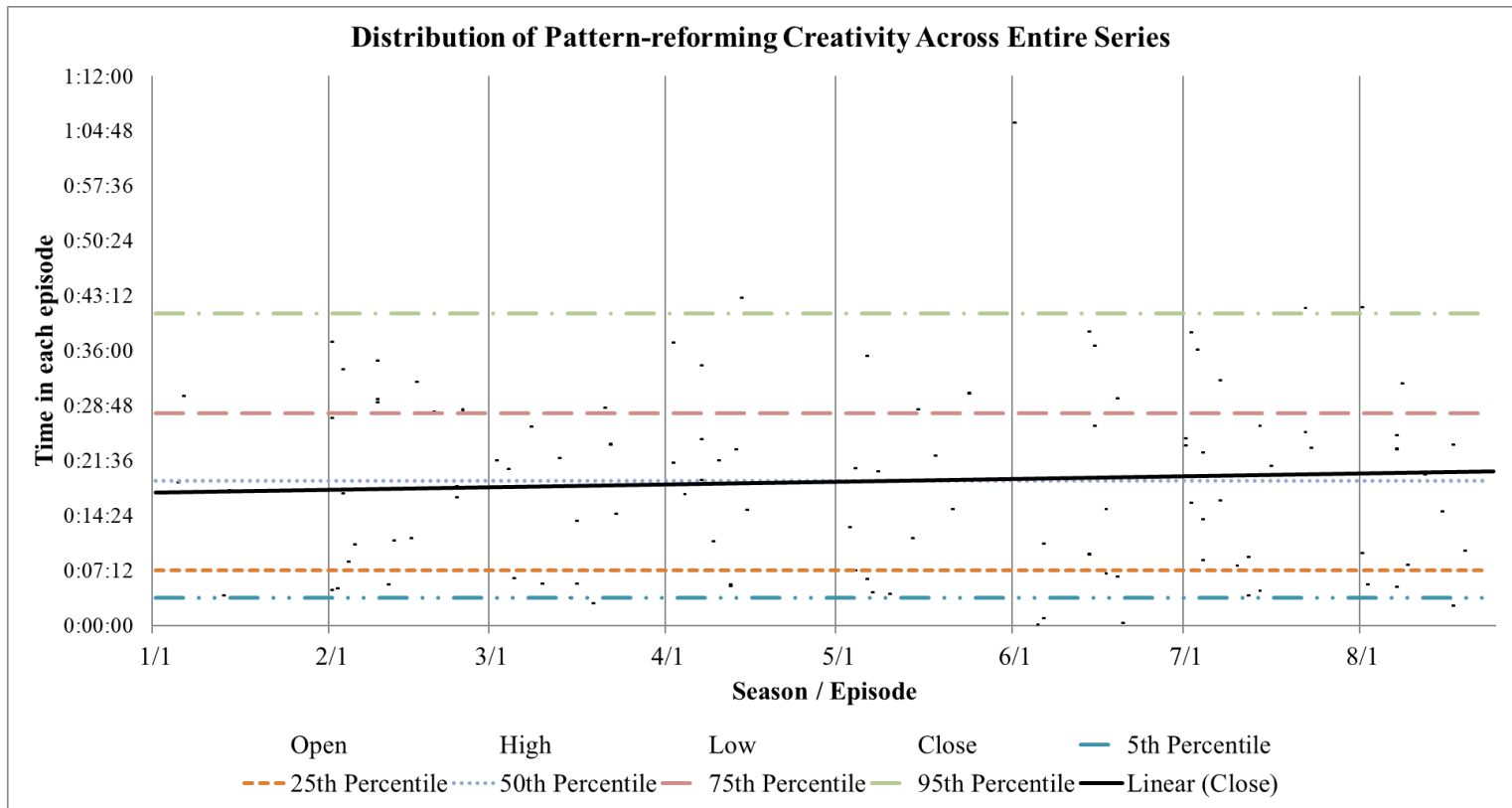
**Figure 3:** Distribution of pattern-reforming creativity across entire series of *House M.D.*

Using stock chart as the charting type, a scatter graph (Figure 3) is created to illustrate the distribution of all instances of pattern-reforming creativity in hour, minute, second timecode format (h:mm:ss) across the entire series. As the duration of their appearances are miniscule relative to the entire episode, each instance appears as a dot in the graph. The graph is plotted using Episode as the x-axis with Season as the major gridlines and timecode as y-axis. After a simple calculation of 5th, 25th, 50th, 75th, 95th percentile using Microsoft Excel's default formula =PERCENTILE.EXC(ARRAY, k)[3], their percentile lines are added to the graph. The addition of a trendline to Figure 3 shows an increasing trend of pattern-reforming creativity from season 1 to season 8. From the figure, it can be observed that, with the exception of one instance of pattern-reforming creativity from a double episode (Season 6 Episode 1 *Broken (Part 1)* and Episode 2 *Broken (Part 2)*), nearly all instances of pattern-reforming creativity cluster around the trendline and the 50th percentile.

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[3] As far as the data is concerned, the formula =PERCENTILE.INC(ARRAY, k) makes little difference in terms of calculation from the formula =PERCENTILE(ARRAY, k) from earlier versions of Microsoft Excel

**Table 4:** Counts of instances of pattern-reforming creativity

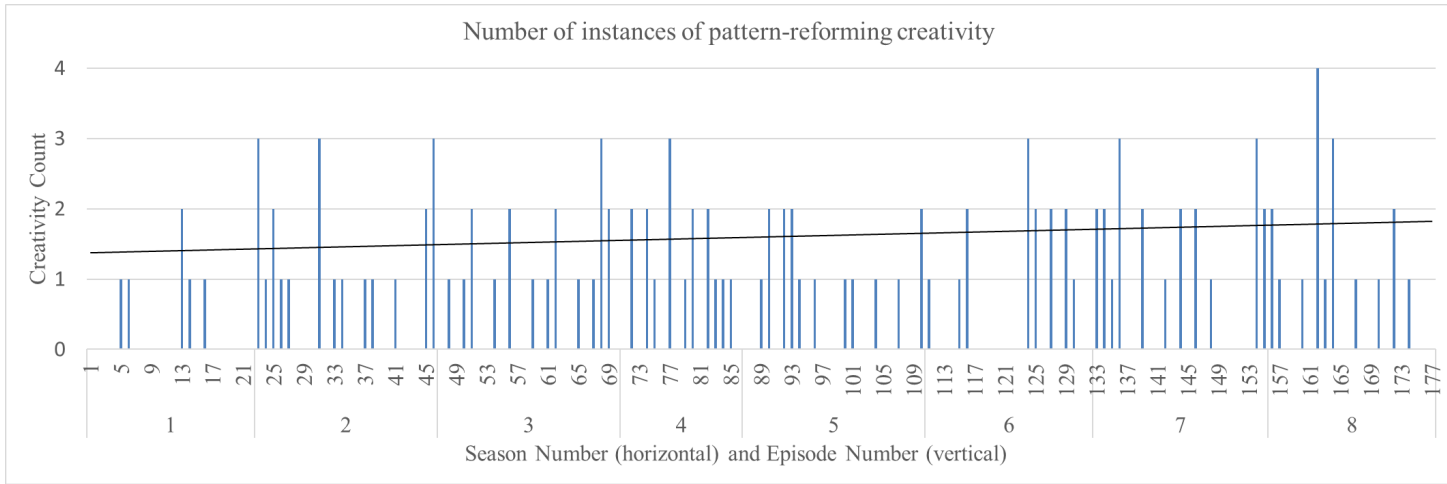| Count of instances of pattern-reforming creativity | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentile | Season | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Total | Avg. count per min. |
| | No. of episodes | | 22 | 24 | 24 | 16 | 24 | 22 | 23 | 22 | 177 | |
| | Timecode | Duration | | | | | | | | | | |
| 0th-5th percentile | 0:00:00-0:03:38 | 0:03:38 | 1 | 0 | 1 | 1 | 0 | 3 | 0 | 1 | 7 (5.5%) | 1.93 |
| 5th-25th percentile | 0:03:39-0:07:14 | 0:03:35 | 2 | 3 | 7 | 2 | 5 | 2 | 2 | 2 | 25 (19.5%) | 6.98 |
| 25th-50th percentile | 0:07:15-0:18:33 | 0:11:18 | 0 | 7 | 2 | 3 | 3 | 4 | 6 | 5 | 30 (23.4%) | 2.65 |
| 50th-75th percentile | 0:18:34-0:26:15 | 0:07:41 | 1 | 0 | 7 | 6 | 3 | 1 | 9 | 6 | 33 (25.8%) | 4.30 |
| 75th-95th percentile | 0:26:16-0:40:52 | 0:14:36 | 1 | 11 | 1 | 2 | 4 | 3 | 3 | 1 | 26 (20.3%) | 1.78 |
| 95th-100th percentile | 0:40:53-end | 0:03:07 (estimate) | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 3 | 7 (5.5%) | 2.25 |
| Total | | | 6 | 21 | 18 | 16 | 15 | 14 | 21 | 17 | 128 | |
| Avg. count per episode | | | 0.27 | 0.88 | 0.75 | 1.00 | 0.63 | 0.64 | 0.91 | 0.77 | | |

The counts of pattern-reforming creativity instances are tabulated in **Table 4**. The table shows that the instances of pattern-reforming creativity follow a well-balanced normal distribution, despite the seemingly random scattering. The 5th-25th percentile has recorded the highest average count per minute across all episodes at 6.98 ( = 25 / 3 mins 35 secs), making 0:03:39-0:07:14 the most pattern-reforming creativity-densed period in *House M.D.* (which has generally 44 minutes of runtime per episode according to IMDb (n.d.)).

Considering the counts per episode in a season, the average count per episode in a season is the lowest for Season 1 at 0.27 and highest for Season 4 at 1.00. The rest of the seasons are all above 0.63. Judging from this, it is possible that the screenwriters began to emphasize more on the use of pattern-reforming creativity from Season 2 onwards.

The total count of pattern-reforming creativity in all 177 episodes is 128, and therefore the mean is 0.72 counts per episode. This shows that Season 2, 3, 4, 7 and 8 have an average count per episode that is above the mean, while Season 1, 5 and 6 have an average count per episode that is below the mean.

The above normal distribution of pattern-reforming creativity instances is not a coincidence, but rather a motif with a motive. Bordwell and Thompson ([1990] 2008) argue that similarity and repetition contribute to the audience's understanding of the narrative, in a way that a familiar format must be presented to the audience and therefore allowing them to be able to recall elements such as characters and settings. Any significant repeated element in a film or a TV drama, including a character trait, can be considered as a motif (Bordwell and Thompson, [1990] 2008). Since creativity production by the characters of *House M.D.* is a character trait, it is highly possible that there is a motive behind the time of appearances of creativity.

**Figure 4:** Number of pattern-reforming creativity per episode across entire series of *House M.D.*

Figure 4 is a clustered column chart illustrating the number of instances of pattern-reforming creativity of every episode across the entire series of *House M.D.*. These figures show that pattern-reforming creativity is absent in more than half of the episodes in the series (97 of 177 episodes). For the episodes with pattern-reforming creativity counts (80 of 177 episodes), more than half of the episodes have only one count (43 of 80 episodes).

## 3.2  Semiotic Resources and Pattern-reforming Creativity

### 3.2.1 Facial Expressions VS Visual Framing

Using PivotTables, multiple semiotic resources can be cross-tabulated quickly for easy visualization and data-mining. Table 5 shows a PivotTable of Facial Expressions tabulated against Visual Framing, sorted by descending order of pattern-reforming creativity count. It contains all 32 combinations of facial expressions (including the absence of visible facial expressions, represented by '(blank)') performed by the actors, and 11 combinations of visual framing techniques used in 128 instances of pattern-reforming creativity. The term 'combination' is used instead of 'type', as some instances of pattern-reforming creativity involve more than one type of facial expressions or visual framing techniques.

Judging from the combinations of facial expressions in the Table 5, it is apparent that distinctive emotions such as 'annoyed', 'upset', 'happy' and 'concerned' are comparatively infrequent, whereas compound movements of facial organs accounts for most of the combinations. Such finding corroborates the research by Du, Tao and Martinez (2014), in which they suggest a 21-distinct emotion set should be used instead of the common six basic categories – happiness, surprise, anger, sadness, fear and disgust. Instead, it can be observed that 'raises eyebrow, big eye stare' (30 counts), '(blank)' (20 counts) and 'frowns' (13 counts) rank top three in the list of facial expressions, contributing a total of 63 of 128 counts (49.2%) of pattern-reforming creativity, almost half of the total occurrences.

In terms of shots, 'medium close-up' (39 counts), 'close-up' (16 counts), 'medium shot' (16 counts), 'medium close-up, over-the-shoulder shot' (16 counts) and 'medium shot, over-the-shoulder shot' (15 counts) rank top five in the list of visual framing techniques used in the delivery of pattern-reforming creativity, contributing a total of 102 of 128 counts (79.7%). It is therefore evident that pattern-reforming creativity is likely to appear with close-up, medium close-up, medium shot, over-the-shoulder shots and combinations of these shots in this particular TV drama *House M.D.*.

A reasonable explanation for the preference in these visual framing shots is that, by adopting these combinations of shots, the distance of the participants (i.e. the creators and/or targets) from the camera (and thus the viewers) can be kept within certain proximity. This is pointed out by Kress and van Leeuwen (2006 [1996]: 124) that "the choice of distance can suggest different relations between represented participants and viewers." In order to look deeper into how the choice of distance relates to the relations between actors and viewers, proxemics will be added to the mix in the next section.

**Table 5:** Pivot table of facial expression VS visual framing

| Facial Expression | Medium close-up | Close-up | Medium shot | Medium close-up, Over-The-Shoulder shot | Medium shot, Over-The-Shoulder shot | Medium shot, Two shot | Medium long shot | Medium long shot, Over-The-Shoulder shot | Long shot | Medium close-up, Two shot | Close-up, Over-The-Shoulder shot | POV shot | Medium close-up, Two shot, Over-The-Shoulder shot | Close-up, Two shot | Long shot, Two shot | Long shot, Over-The-Shoulder shot | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| raises eyebrows, big-eye stare | 6 | 5 | 7 | 5 | 2 | 1 | 1 | 2 | 1 | | | | | | | | 30 |
| (blank) | 5 | 3 | 3 | 3 | 3 | | | 1 | 1 | 1 | | | | | | | 20 |
| frowns | 4 | 1 | 1 | 1 | 3 | 3 | | | | | | | | | | | 13 |
| raises eyebrows | 4 | | 1 | | | 1 | 1 | | | 1 | | | 1 | | | | 9 |
| normal | 3 | 2 | 1 | 1 | 1 | | 1 | | | | | | | | | | 9 |
| raises eyebrows, big-eye stare, head jerks | 2 | 1 | | | 3 | | | | | | | | | | | | 6 |
| big-eye stare | 3 | | 2 | | | | | | | | | | | | | | 5 |
| head jerks | 2 | | | | | | | | 1 | | | | | | | 1 | 4 |
| directed stare | | 2 | | | | | | | | | | | | 1 | | | 3 |
| annoyed | 3 | | | | | | | | | | | | | | | | 3 |
| directed stare, raises eyebrows | 1 | | | | 1 | | | | | | | | | | | | 2 |
| frowns, big-eye stare | | | | 1 | | 1 | | | | | | | | | | | 2 |
| happy | | 2 | | | | | | | | | | | | | | | 2 |
| directed stare, head jerks | | | | 1 | | | | | | | | 1 | | | | | 2 |
| raises eyebrows, closes eyes, head jerks | 1 | | | | | | | | | | | | | | | | 1 |
| concentrated | | | | | | | | | | | | | | | 1 | | 1 |
| upset | | | | | | | | | | | 1 | | | | | | 1 |
| frowns, raises eyebrows | | | 1 | | | | | | | | | | | | | | 1 |
| frowns, flaps tongue and smiles | | | | | | | | | | | 1 | | | | | | 1 |
| head shakes | 1 | | | | | | | | | | | | | | | | 1 |
| serious, urgent | 1 | | | | | | | | | | | | | | | | 1 |
| directed stare, blinks | 1 | | | | | | | | | | | | | | | | 1 |
| upset, smiling | | | | 1 | | | | | | | | | | | | | 1 |
| frowns, head jerks to right | | | | | 1 | | | | | | | | | | | | 1 |
| frowns, big-eye stare, head shakes | | | | 1 | | | | | | | | | | | | | 1 |
| lower jaw protrudes | | | | | 1 | | | | | | | | | | | | 1 |
| closes eyes; angry | | | | 1 | | | | | | | | | | | | | 1 |
| concerned | | | | | | | | | | | | 1 | | | | | 1 |
| closes eyes, big-eye stare | | | | | | | 1 | | | | | | | | | | 1 |
| raise eyebrows | | | | 1 | | | | | | | | | | | | | 1 |
| closes eyes | 1 | | | | | | | | | | | | | | | | 1 |
| head jerks, distracted | 1 | | | | | | | | | | | | | | | | 1 |
| **Grand Total** | **39** | **16** | **16** | **16** | **15** | **6** | **4** | **3** | **3** | **2** | **2** | **2** | **1** | **1** | **1** | **1** | **128** |

*3.2.2 Facial Expressions and proxemics VS Visual Framing*

Table 6 illustrates an extract of PivotTable of Facial Expressions and Proxemics tabulated against Visual Framing, covering only the top five shots, namely 'medium close-up', 'close-up', 'medium shot', 'medium close-up, over-the-shoulder shot' and 'medium shot, over-the-shoulder shot'. Personal space and social space contribute 72 (70.6%) and 26 (25.5%) respectively of the 102 counts of pattern-reforming creativity counts in every facial expression combination and all top five visual framing shots (i.e. 98 of 102 counts (96.1%)). Therefore, it is arguable that the realisation of pattern-reforming creativity appears to be related to personal space and social space together with the said five shots. These shots generally keep proximity within the social space (and obviously intimate and personal space too) which is close and recognisable enough for viewers to observe the actors' facial expressions.

An interesting observation is that facial expression '(blank)' ranks second in the PivotTable in Table 6  (and Table 5). This demonstrates that the delivery of pattern-reforming creativity does not necessarily require the visual images of the creators' facial expressions. In fact, in 7 of 17 instances (41.2%) of '(blank)', only the targets are present in the salient frames and so the kinesic expressions and orientation of the creators are absent. The other 10 of 17 instances (58.8%) show the presence of the creators but the absence of gestures, facial expressions or gaze in the salient frames. It is therefore important to look into the presence or absence of gestures and gaze at the moments of pattern-reforming creativity production.

**Table 6:** A extract of PivotTable of facial expression and proxemics VS visual framing

| Facial Expression | Medium close-up | Close-up | Medium shot | Medium close-up, Over-The-Shoulder shot | Medium shot, Over-The-Shoulder shot | Grand Total |
|---|---|---|---|---|---|---|
| ⊟ raises eyebrows, big-eye stare | 6 | 5 | 7 | 5 | 2 | 25 |
|   Personal Space | 6 | 5 | 3 | 5 | 2 | 21 |
|   Social Space | | | 4 | | | 4 |
| ⊟ (blank) | 5 | 3 | 3 | 3 | 3 | 17 |
|   Intimate Space | | | | 1 | | 1 |
|   Personal Space | 3 | 3 | 2 | 2 | | 10 |
|   Public space | | | | | 1 | 1 |
|   Social Space | 2 | | 1 | | 2 | 5 |
| ⊟ frowns | 4 | 1 | 1 | 1 | 3 | 10 |
|   Personal Space | 4 | 1 | | 1 | 2 | 8 |
|   Social Space | | | 1 | | 1 | 2 |
| ⊟ normal | 3 | 2 | 1 | 1 | 1 | 8 |
|   Intimate Space | | 1 | | | | 1 |
|   Personal Space | 3 | 1 | | 1 | | 5 |
|   Social Space | | | 1 | | 1 | 2 |
| ⊟ raises eyebrows, big-eye stare, head je | 2 | 1 | | | 3 | 6 |
|   Intimate Space | | 1 | | | | 1 |
|   Personal Space | 2 | | | | 1 | 3 |
|   Social Space | | | | | 2 | 2 |
| ⊟ raises eyebrows | 4 | | | 1 | | 5 |
|   Personal Space | 4 | | | 1 | | 5 |
| ⊟ big-eye stare | 3 | | 2 | | | 5 |
|   Personal Space | 2 | | | | | 2 |
|   Social Space | 1 | | 2 | | | 3 |
| ⊟ annoyed | 3 | | | | | 3 |
|   Personal Space | 2 | | | | | 2 |
|   Social Space | 1 | | | | | 1 |
| ⊟ directed stare, raises eyebrows | 1 | | | | 1 | 2 |
|   Personal Space | 1 | | | | | 1 |
|   Social Space | | | | | 1 | 1 |
| ⊟ directed stare | | 2 | | | | 2 |
|   Personal Space | | 2 | | | | 2 |

### 3.2.3 Gestures VS Visual Framing

The absence of gesture in pattern-reforming creativity can be clearly observed when Gestures is tabulated against Visual Framing, as shown in

**Table 7**. In a total of 128 counts of pattern-reforming creativity, 100 of 128 counts (78.1%) are '(blank)', implying that there is a high tendency for the absence of gesture in the visual images at the moment of creativity production. Judging from the 28 different gestures of the other 28 of 100 counts, it is apparent that there is little correlation between any particular gesture and the production of pattern-reforming creativity in this TV drama. This may be partly related to the choice of visual framing. Since the use of camera shots is an active decision of the cinematographers to construe the necessary meanings within the constraints of visual framing, cinematographers may select specific types of shots to avoid (or adopt) the use of gestures when delivering pattern-reforming creativity.

From **Table 7**, it can be seen that 'medium close-up' (36 counts), 'close-up' (14 counts), 'medium shot' (8 counts), 'medium close-up, over-the-shoulder shot' (15 counts) and 'medium shot, over-the-shoulder shot' (8 counts) account for a total of 81 of 100 counts (81%). These camera shots have framing that, by definitions, "restricts the freedom of gesture" to the extent that an actor's hands are often not captured when they are at the natural position (Thompson and Bowen, 2009: 16). These shots generally require the actors to make conscious upper-limb movements in order to have their gestures captured. Therefore, there are reasons to believe that the cinematographers have made conscious decisions in choosing these camera shots at the non-gestural (or gestural) moments of pattern-reforming creativity production, and the '(blank)' moments reveal that gesture may not be a key semiotic resource to the delivery of pattern-reforming creativity.

**Table 7:** PivotTable of gesture vs visual framing

| Gesture | Medium close-up | Close-up | Medium shot | Medium close-up, Over-The-Shoulder shot | Medium shot, Over-The-Shoulder shot | Medium shot, Two shot | Medium long shot | Medium long shot, Over-The-Shoulder shot | Long shot | Medium close-up, Two shot | Close-up, Over-The-Shoulder shot | POV shot | Medium close-up, Two shot, Over-The-Shoulder shot | Close-up, Two shot | Long shot, Two shot | Long shot, Over-The-Shoulder shot | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (blank) | 36 | 14 | 8 | 15 | 8 | 4 | 2 | 2 | 3 | 1 | 2 | 2 | | 1 | 1 | 1 | 100 |
| Arm movement, presumably pointing to patient | 1 | | | | | | | | | | | | | | | | 1 |
| Closing umbrella | | | 1 | | | | | | | | | | | | | | 1 |
| Crossed arms | | | | | | | 1 | | | | | | | | | | 1 |
| Going to take pills | | | 1 | | | | | | | | | | | | | | 1 |
| Grabbing file with left hand and cane with the right | | | | | 1 | | | | | | | | | | | | 1 |
| Grabbing his gloves | | | 1 | | | | | | | | | | | | | | 1 |
| head jerk | 1 | | | | | | | | | | | | | | | | 1 |
| Holding a ball on left hand | | | 1 | | | | | | | | | | | | | | 1 |
| Holding a patient's file with left hand | | | | | | 1 | | | | | | | | | | | 1 |
| Holding a pen | | | 1 | | | | | | | | | | | | | | 1 |
| Holding a yoyo, stopped playing before he spoke | | | | | 1 | | | | | | | | | | | | 1 |
| Holding cane in his right hand | | | | | 1 | | | | | | | | | | | | 1 |
| Holding marker on his left hand | | | | | | | | 1 | | | | | | | | | 1 |
| Holding phone on his right hand | | | | 1 | | | | | | | | | | | | | 1 |
| Holding phone with his left hand | | | 1 | | | | | | | | | | | | | | 1 |
| Holding pieces of paper | | | 1 | | | | | | | | | | | | | | 1 |
| Laying down patient | | 1 | | | | | | | | | | | | | | | 1 |
| Making coffee | | | | | 1 | | | | | | | | | | | | 1 |
| Making coffee (not shown) | | | | | | | | | | | | | 1 | | | | 1 |
| Opening a drawer | | | | | | 1 | | | | | | | | | | | 1 |
| Pointing Kutner left hand | 1 | | | | | | | | | | | | | | | | 1 |
| Pressing the lift button with right hand while holding a cane | | | 1 | | | | | | | | | | | | | | 1 |
| Putting pen inside his jacket with left hand | | | | | 1 | | | | | | | | | | | | 1 |
| Right hand holding bottle of wine | | | | | | | | | | 1 | | | | | | | 1 |
| Right hand resting on laptop | | 1 | | | | | | | | | | | | | | | 1 |
| Showing right hand | | | | | | | 1 | | | | | | | | | | 1 |
| Waving sword | | | | | 1 | | | | | | | | | | | | 1 |
| Writing | | | | | 1 | | | | | | | | | | | | 1 |
| Grand Total | 39 | 16 | 16 | 16 | 15 | 6 | 4 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 128 |

*3.2.4 Gaze VS Visual Framing*

Table 8 shows a PivotTable of Gaze tabulated against Visual Framing. I have differentiated the gaze targets are into two major types: physical and spatial. Physical targets are targets of living things such as humans, animals, plants and organisms, and non-living objects such as files, phones and magazines. Spatial targets are the directions such as up, down, top-right corner, North and South. These presence of creator's gaze targets is contrasted with the absence of creator's gaze targets, which is represented by '(blank)' in the PivotTable.

From the PivotTable, it can be seen that most instances of pattern-reforming creativity involve the creator's gaze at a physical target, leaving a small number of instances with spatial targets or with no creator's gaze. In terms of physical targets, the PivotTable includes of 28 human gaze targets in 44 gaze targets (63.6%), accounting for 71 of 128 counts of pattern-reforming creativity (55.5%) and 8 object gaze targets in 44 gaze targets (18.2%), accounting for 9 of 128 counts of pattern-reforming creativity (7.0%). Therefore, physical targets contribute a total of 36 of 44 gaze targets (81.8%) and 80 of 128 counts of pattern-reforming creativity (62.5%). In terms of spatial targets, the PivotTable includes 7 directional gazes in 44 gaze targets (15.9%), accounting for 33 of 128 counts of pattern-reforming creativity (25.8%).

From the above analysis, it becomes apparent that the presence of a physical target for creators' gaze at the moments of pattern-reforming creativity plays a crucial part in the construction of visual images in *House M.D.*. However, it is also noteworthy that '(blank)' is ranked second in the list of gaze with 15 of 128 counts of pattern-reforming creativity (11.7%), which is three count less than spatial directional gaze 'forward' with 18 of 128 counts (14.1%) and six counts more than physical human gaze target 'at Foreman' with 9 of 128 counts (7.0%). 14 of 15 counts of '(blank)' adopts the top five visual framing shots. This implies that the absence of gaze from the creator during the production of pattern-reforming creativity is a conscious decision – possibly a strategic option adopted by the

directors of photography of this TV series. A review of the '(blank)' pattern-reforming creativity salient frames shows a variety of cinematographic choices. These choices include

1) the use of over-the-(creator's)-shoulder shot while focusing a participant in the centre of the frame looking towards the creator. Using this shot, the creator's gaze is not visible to the viewers and so the viewers will have to assume its presence and its gaze target. The participant is often the target of pattern-reforming creativity but can also be an overhearer.

2) the focus of a participant in the centre of the frame. In a way, this is similar to 1) except the creator is completely absent from the frame and so the gaze of this participant may or may not be present. If the gaze of the participant is present, his gaze target is likely to be assumed by the viewers.

3) the presence of an object in the centre of the frame. The creator and the target of pattern-reforming creativity may be completely absent from the frame. The object in focus is almost always relevant to the story.

4) the presence of any participants or objects in the frame during a narration of past events by the creator of pattern-reforming creativity.

**Table 8:** PivotTable of gaze vs visual framing

| Creator's Gaze | Medium close-up | Close-up | Medium shot | Medium close-up, Over-The-Shoulder shot | Medium shot, Over-The-Shoulder shot | Medium shot, Two shot | Medium long shot | Medium long shot, Over-The-Shoulder shot | Long shot | Medium close-up | Close-up, Over-The-Shoulder shot | POV shot | Medium close-up, Two shot, Over-The-Shoulder shot | Close-up, Two shot | Long shot, Two shot | Long shot, Over-The-Shoulder shot | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| forward | 6 | 2 | 2 | 2 | 1 | 1 | 1 | | 1 | 1 | | | | 1 | | | 18 |
| (blank) | 5 | 3 | 2 | 3 | 1 | | | | | | | 1 | | | | | 15 |
| at Foreman | 2 | 1 | | 1 | 3 | | 1 | | | | | | 1 | | | | 9 |
| at Wilson | 3 | 1 | 2 | 1 | | | | | | | 1 | | | | | | 8 |
| at Chase | 1 | | | 1 | 2 | | 1 | 1 | | | | | | | | | 6 |
| at Cuddy | 1 | 1 | 1 | 2 | 1 | | | | | | | | | | | | 6 |
| up | 1 | 1 | 1 | | | 2 | | | | | | | | | 1 | | 6 |
| at the team | 2 | | 2 | | 2 | | | | | | | | | | | | 6 |
| at Cameron | | 2 | 2 | | | | | 1 | | | | | | | | | 5 |
| at Kutner | 2 | | 1 | | | | | 1 | | | | | | | | | 4 |
| at Thirteen | 1 | | 2 | | | | | | | | | | | | | | 3 |
| at Tritter | | | | | 2 | | | | | | | | | | | | 2 |
| at Adams | 2 | | | | | | | | | | | | | | | | 2 |
| at Taub | 2 | | | | | | | | | | | | | | | | 2 |
| at House | 1 | | | 1 | | | | | | | | | | | | | 2 |
| at the floor | 1 | 1 | | | | | | | | | | | | | | | 2 |
| at top-right corner | 2 | | | | | | | | | | | | | | | | 2 |
| at camera | 1 | | | | | | | | | | 1 | | | | | | 2 |
| to the left | 1 | | | 1 | | | | | | | | | | | | | 2 |
| down | 1 | | | | 1 | | | | | | | | | | | | 2 |
| forward, down | | | | | 1 | | | | | | | | | | | | 1 |
| at Nolan | | | | | | | | | | | | | | | | 1 | 1 |
| at Sister Mary Eucharist | | | | 1 | | | | | | | | | | | | | 1 |
| at Artic | | | | 1 | | | | | | | | | | | | | 1 |
| at plastic surgeon, at camera | | 1 | | | | | | | | | | | | | | | 1 |
| at Kelly | 1 | | | | | | | | | | | | | | | | 1 |
| at Jerry | | 1 | | | | | | | | | | | | | | | 1 |
| at patient | | | | | | 1 | | | | | | | | | | | 1 |
| at patient then at Chase | 1 | | | | | | | | | | | | | | | | 1 |
| at Alvie | | | | | | 1 | | | | | | | | | | | 1 |
| at Moriarty, at camera | 1 | | | | | | | | | | | | | | | | 1 |
| at Benedict, at camera | 1 | | | | | | | | | | | | | | | | 1 |
| at tax accountant | | | | 1 | | | | | | | | | | | | | 1 |
| at Lucas | | | | | | | | | | | | 1 | | | | | 1 |
| at Crandall | | 1 | | | | | | | | | | | | | | | 1 |
| at Nicole | | | | | | | 1 | | | | | | | | | | 1 |
| at Franni | | | | | | | | | 1 | | | | | | | | 1 |
| at the lift display | | | 1 | | | | | | | | | | | | | | 1 |
| at the drawer | | | | | | 1 | | | | | | | | | | | 1 |
| at the file | | | | | 1 | | | | | | | | | | | | 1 |
| at a cane, at camera | | | | | | | | | | 1 | | | | | | | 1 |
| at letter | | 1 | | | | | | | | | | | | | | | 1 |
| at the phone | | | | | | | | | 1 | | | | | | | | 1 |
| at magazine | | | | 1 | | | | | | | | | | | | | 1 |
| Grand Total | 39 | 16 | 16 | 16 | 15 | 6 | 4 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 128 |

### 3.2.5 Summary

Table 9 are individual PivotTables of semiotic resources namely 'creator', 'visual framing', 'camera angle' and 'camera movement' and Table 10 are individual PivotTables of semiotic resources namely 'physical movement in space', 'proxemics', 'stance, posture' and 'music, song'. From these tables, it can be seen that pattern-reforming creativity (128 instances in 177 episodes) is contributed mostly by the protagonist Dr. Gregory House (72.7%), followed by Chase and Wilson (4.69%) and then by Foreman and Taub (2.34%). This prominence in pattern-reforming creativity production has created an intellectual distance between House, a "subtle homage" to Sherlock Holmes (Radio Times, 2006), and the supporting characters.

Five types of visual framing are commonly used to realise pattern-reforming creativity: 'medium close-up' (30.5%), 'close-up' (12.5%), 'medium shot' (12.5%), 'medium close-up, over-the-shoulder shot' (12.5%) and 'medium shot, over-the-shoulder shot' (11.7%), accounting for 79.7% of all shots. Top three in the list of facial expressions at the moments of pattern-reforming creativity production are 'raises eyebrow, big eye stare' (23.4%), '(blank)' (15.6%) and 'frown' (10.2%), contributing a total of 63 of 128 counts (49.2%) (**Table 5**). Arguably, the use of pattern-reforming creativity is closely related to these five shots as the shots can maintain a viewable distance between the facial expressions of the creators and the viewers. However, the analysis has numerically shown that the presence of the creators' facial expressions is not mandatory, as the facial expressions of the targets or other participants, or even objects, can fill the gaps (**Table 6**). Statistics show that gesture may not be a key semiotic resource to the delivery of pattern-reforming creativity (**Table 7**), whereas the presence and the occasional absence of a physical target for creators' gaze in *House M.D.* have shown to be important in construing pattern-reforming creativity (**Table 8**).

Moments of pattern-reforming creativity are captured predominately at eye-level (89.1%) with stationary camera movement (69.5%) or through tracking shot (14.8%) (**Table 9**). These cinematographic choices provide a simple yet direct view of the creators, targets, participants or objects. Creators tend to produce pattern-reforming creativity when body is stationary (85.2%), mostly in upright (48.4%) and sitting position (35.9%) within personal (63.3%) and social space (28.1%). A stationary body of a creator, with relatively regular postures within a reachable social distance, can maintain a certain level of interpersonality with the viewers, and hence the interpersonality of the pattern-reforming creativity to the viewers. Music or song is almost always absent (88.3%) at the moment of pattern-reforming creativity production, which shows that auditory soundtrack is not a key semiotic resource in construing such creativity in *House M.D.* (**Table 10**), possibly to avoid distracting the viewers' attention from the main message (Park and Young, 1986), which is the pattern-reforming creativity itself.

**Table 9:** Individual PivotTables of 'creator', 'visual framing', 'camera angle' and 'camera movement'

| Creator | Count of Pattern-reforming | Visual Framing | Count of Pattern-reforming | Camera angle | Count of Pattern-reforming | Camera Movement | Count of Pattern-reforming |
|---|---|---|---|---|---|---|---|
| House | 72.66% | Medium close-up | 30.47% | Eye-level | 89.06% | Stationary | 69.53% |
| Chase | 4.69% | Close-up | 12.50% | Low | 6.25% | Tracking shot | 14.84% |
| Wilson | 4.69% | Medium shot | 12.50% | Waist-level | 2.34% | Hand-held shot | 8.59% |
| Foreman | 2.34% | Medium close-up, Over-The-Shoulder shot | 12.50% | High | 2.34% | Walk-and-talk | 4.69% |
| Taub | 2.34% | Medium shot, Over-The-Shoulder shot | 11.72% | **Grand Total** | **100.00%** | Tilt shot | 1.56% |
| Emory | 1.56% | Medium shot, Two shot | 4.69% | | | Zooming in | 0.78% |
| Rachel | 1.56% | Medium long shot | 3.13% | | | **Grand Total** | **100.00%** |
| Patient | 1.56% | Medium long shot, Over-The-Shoulder shot | 2.34% | | | | |
| Madison | 0.78% | Long shot | 2.34% | | | | |
| Jordan | 0.78% | Medium close-up, Two shot | 1.56% | | | | |
| Nate | 0.78% | Close-up, Over-The-Shoulder shot | 1.56% | | | | |
| Cole | 0.78% | POV shot | 1.56% | | | | |
| Security guard | 0.78% | Medium close-up, Two shot, Over-The-Shoulder shc | 0.78% | | | | |
| Cuddy | 0.78% | Close-up, Two shot | 0.78% | | | | |
| Sykes | 0.78% | Long shot, Two shot | 0.78% | | | | |
| Clarence | 0.78% | Long shot, Over-The-Shoulder shot | 0.78% | | | | |
| Cameron | 0.78% | **Grand Total** | **100.00%** | | | | |
| Artie | 0.78% | | | | | | |
| Jack | 0.78% | | | | | | |
| **Grand Total** | **100.00%** | | | | | | |

**Table 10:** Individual PivotTables of 'physical movement in space', 'proxemics', 'stance, posture' and 'music, song'

| Physical Movement in Sp ⤵ | Count of Pattern-reforming | | Proxemics ⤵ | Count of Pattern-reforming | | Stance, Posture ⤵ | Count of Pattern-reforming | | Music, Song ⤵ | Count of Pattern-reforming |
|---|---|---|---|---|---|---|---|---|---|---|
| Stationary | 85.16% | | Personal Space | 63.28% | | Upright | 48.44% | | (blank) | 88.28% |
| Walking | 9.38% | | Social Space | 28.13% | | Sitting | 35.94% | | Background music | 5.47% |
| House: Walking with cane | 2.34% | | Public space | 6.25% | | (blank) | 7.03% | | Background music comes in | 2.34% |
| Walking and stopping at the lift | 0.78% | | Intimate Space | 2.34% | | Lying down | 4.69% | | Mouse-clicking sound | 0.78% |
| Sitting | 0.78% | | **Grand Total** | **100.00%** | | Getting up | 0.78% | | Electric-guitar starts | 0.78% |
| Turning | 0.78% | | | | | Bending over | 0.78% | | Beeping sounds | 0.78% |
| Getting up from a chair | 0.78% | | | | | Bending down | 0.78% | | Background chattering | 0.78% |
| **Grand Total** | **100.00%** | | | | | House: bending down | 0.78% | | Background sounds of ER, machines beepi | 0.78% |
| | | | | | | Leaned forward slightly | 0.78% | | **Grand Total** | **100.00%** |
| | | | | | | **Grand Total** | **100.00%** | | | |

## 4. Conclusion

This paper has shed light on the relationship between pattern-reforming creativity and teledramatic performances of one of the world's most popular TV dramas. As the analysis of *House M.D.* suggests, the use of pattern-reforming creativity in this TV drama is based on conscious decisions. These decisions include the time of appearance of pattern-reforming creativity in an episode, the frequency of pattern-reforming creativity production by a character, the actors' telecinematic performances which deliver the pattern-reforming creativity, and the cinematographic strategies adopted by the directors of photography. Since actors' performances bear some resemblance to the actual human behaviour (Bednarek, 2010), the findings in this paper could be useful resources for the contrastive studies of linguistic creativity in spoken American English in the real world.

This paper limits the extraction of pattern-reforming creativity to only three creative linguistic forms, namely neologism, portmanteau and slang words. These forms are relatively more lexicogrammatically distinguishable than other types of creativity and are thus translatable into computer-recognisable extraction criteria for WordSmith Tools. However, computer-extractable creative linguistic forms are not limited to the ones covered in this paper and are opened to possibilities of future research. For instance, linguistic repetitions – a feature of Carter's (2004) pattern-forming creativity – is worth exploring (see Law, forthcoming).

While this paper may have suggested possible correlations between instances of pattern-reforming creativity and semiotic resources in *House M.D.*, it must be acknowledged that the presented categorical data have posed complications for complex statistical analysis, such as a statistical hypothesis testing. Even if the result did show a statistical significance in any correlations, one must be reminded that correlation does not imply causation. Further

research of a greater scale, perhaps using a much larger TV drama corpus, is needed.

The multimodal discourse analysis demonstrated in this paper aims to showcase a number of simple yet useful analytical steps using basic tools available in Microsoft Excel. It is hope that researchers of multimodality will see benefits in the use of ubiquitous spreadsheet tools and not be deterred by the lack of computer programming knowledge. Future research on pattern-forming creativity, the counterpart of pattern-reforming creativity, will provide a fuller picture into the interactions between creative language production, teledramatic performance and telecinematography.

# References

ABC Medianet. 2004. *ABC Medianet*, 23 November. Accessed 26 November 2017 at: https://web.archive.org/web/20081221172650/http://abcmedianet.com/web/dnr/dispDNR.aspx?id=112304_07.

Adams, M. 2009. *Slang: The Peoples Poetry* . Oxford: Oxford University Press.

Adolphs, S. and R. Carter 2007. Beyond the word, *European Journal of English Studies* 11 (2), pp. 133-146.

Algeo, J. 1977. Blends, a structural and systemic view, *American Speech* 52, pp. 47-64.

Allan, K. and K. Burridge 2016. *Forbidden Words: Taboo and the Censoring of Language*. Cambridge: Cambridge University Press.

Allen, R.C. 2004. F requently asked questions. A general introduction to the reader in R. C. Allen and A. Hill (eds.) *The Television Studies Reader*, pp. 1-26 New York: Routledge.

Androutsopoulos, J. 2012. Introduction: Language and society in cinematic discourse, *Multilingua* 31 (2), pp. 139-154.

Baayen, H. 2001. *Word Frequency Distributions*. Dordrecht: Kluwer Academic Publishers.

Baayen, R.H. and A. Renouf 1996. Chronicling The Times: Productive Lexical Innovations in an English Newspaper, *Language* 72 (1), pp. 69-96.

Baker, P., A. Hardie and T. McEnery 2006. *A Glossary of Corpus Linguistics*. Edinburgh: Edinburgh University Press.

Bednarek, M. 2010. *The Language of Fictional Television: Drama and Identity*. London: Continuum International Publishing Group.

Bignell, J. and S. Lacey 2005. *Popular television drama : critical perspectives*. Manchester: Manchester University Press.

Bordwell, D. and K. Thompson [1990] 2008. *Film Art: An Introduction*. New York: McGraw-Hill.

T. G. Bradford and E. Wigglesworth (eds.) 1851. *Encyclopaedia Americana: A popular dictionary of arts, sciences, literature, history, politics and biography, a new edition*. Philadelphia: Lea & Blanchard.

Carter, R. 1999. Common language: corpus, creativity and cognition, *Language and Literature* 8 (3), pp. 195-216.

Carter, R. 2004. *Language and Creativity: The Art of Common Talk*. London: Routledge.

Carter, R. and M. McCarthy 1995. Spoken grammar: what is it and how do we teach it?, *ELT Journal* 49 (3), pp. 207-218.

Carter, R. and M. McCarthy 1999. The English Get -passive in Spoken Discourse: Description and Implications for an Interpersonal Grammar, *English Language and Linguistics* 3 (1), pp. 41-58.

Carter, R. and M. McCarthy 2004. Talking, Creating: Interactional Language, Creativity, and Context, *Applied Linguistics* 25 (1), pp. 62-88.

Ted Cascio and Leonard L. Martin (eds.) 2011. *House and Psychology: Humanity Is Overrated*. Hoboken, New Jersey: Wiley.

Chiaro, D. 1992. *The Language of Jokes: Analysing Verbal Play*. London: Routledge.

Clear, J. (1987). Trawling the Language: Monitor Corpora ZURILEX, pp. 383-389. Tübingen: Francke.

clinic_duty. 2007. *House MD - 4.01 Alone - House Transcripts*, 2 October. Accessed 28 November 2017 at: https://clinic-duty.livejournal.com/21422.html.

Clyman, J. 2009. *Inside the Therapy TV Show You Need to Watch*, 22 June. Accessed 20 April 2013 at: http://www.psychologytoday.com/blog/reel-therapy/200906/inside-the-therapy-tv-show-you-need-watch.

Cook, G. 2002. *The Discourse of Advertising*. London: Routledge.

Crystal, D. 2008. *Language library: A dictionary of linguistics and phonetics*. Hoboken, NJ: Wiley.

Davies, M. 2008. *The Corpus of Contemporary American English: 450 million words, 1990-present*. Accessed 26 November 2014 at: http://corpus.byu.edu/coca/.

Davies, M. 2014. *[Corpora-List] Neologisms*, 10 January at: http://mailman.uib.no/public/corpora/2014-January/019604.html.

Davies, M. 2014. *CoRD | The Corpus of Contemporary American English (COCA)*, 1 December. Accessed 21 March 2011 at: CoRD | The Corpus of Contemporary American English (COCA).

Dise, J. 2016. *B&H Explora*, 7 July. Accessed 29 April 2017 at: https://www.bhphotovideo.com/explora/video/tips-and-solutions/filmmaking-101-camera-shot-types.

Dumas, B.K. and J. Lighter 1978. Is Slang a Word for Linguists?, *American Speech* 53 (1), pp. 5-17.

Du, S., Y. Tao and A. M. Martinez (2014). Compound facial expressions of emotion Proceedings of the National Academy of Sciences, pp. E1454–E1462: PNAS.

Fan, F. 2010. An Asymptotic Model for the English Hapax/Vocabulary Ratio, *Computational Linguistics* 36 (4), pp. 631-637.

Finnegan, R. 2002. *Communicating: The Multiple Modes of Human Interconnection*. London: Routledge.

Gaeta, D. and L. Ricca 2005. Productivity in Italian Word Formation: A Variable Corpus Approach, *Linguistics* 44, pp. 57-89.

Goodier, B.C. and M. I. Arrington 2007. Physicians, patients, and medical dialogue in the NYPD Blue prostate cancer story, *Journal of Medical Humanities* 28 (1), pp. 45-58.

Goodman, S.N. 1999. Toward Evidence -Based Medical Statistics. 1: The P Value Fallacy., *Annals of Internal Medicine* 130 (12), pp. 995-1004.

Gries, S.T. 2004. Shouldnt it be breakfunch? A quantitative analysis of blend structure in English, *Linguistics* 42 (3), pp. 639-667.

Guinness World Record News. 2012. *Record-Holding TV Show House Comes to an End* , 22 May. Accessed 23 November 2015 at: http://www.guinnessworldrecords.com/news/2012/5/record-holding-tv-show-house-comes-to-an-end-42046/.

Hall, E.T. 1966. *The Hidden Dimension*. Garden City, NY: Doubleday.

Luke Hockley and Leslie Gardner (eds.) 2011. *House: The Wounded Healer on Television: Jungian and Post-Jungian Reflections*. Hove: Routledge.

Holtz, A. 2006. *The Medical Science of House M.D.*. New York: Berkley Boulevard.

Holtz, A. 2011. *House M.D. vs. Reality: Fact and Fiction in the Hit Television Series*. New York: Berkley Trade.

IMDb. n.d. *House M.D. - Awards - IMDb*. Accessed 7 July 2014 at: http://www.imdb.com/title/tt0412142/awards?ref_=tt_awd.

Jackman, I. and H. Laurie 2010. *House, M.D.: The Official Guide to the Hit Medical Drama*. New York: It Books.

Henry Jacoby and William Irwin (eds.) 2008. *House and Philosophy: Everybody Lies*. John Wiley & Sons.

Jamieson, D. 2011. *Does TV accurately portray psychology?*, September. Accessed 20 April 2013 at: http://www.apa.org/gradpsych/2011/09/psychology-shows.aspx.

Jurafsky, D. and J. H. Martin 2009. *Speech and language processing : An introduction to natural language processing, computational linguistics, and speech recognition*, 2nd edition. New Jersey: Prentice Hall.

Knight, D., S. Adolphs, P. Tennent and R. Carter (2008). The Nottingham Multi-Modal Corpus: A Demonstration 6th Language Resources and Evaluation Conference. Palais des Congrés Mansour Eddahbi, Marrakech, Morocco.

Kondal, B. 2015. Effects of Lexical Density and Lexical Variety in Language Performance and Proficiency, *International Journal of IT, Engineering and Applied Sciences Research (IJIEASR)* 4 (10), October, pp. 25-29.

Kornai, A. 2002. How many words are there?, *Glottometrics* 4, pp. 61–86.

Kress, G. and T. van Leeuwen 2006 [1996]. *Reading Images: The Grammar of Visual Design*. London and New York: Routledge.

Law, L. forthcoming. Creativity and multimodality: An analytical framework for creativity in multimodal texts (AFCMT), *Linguistics and Human Sciences* 14 (1).

Li, Q. and M. Csikszentmihalyi 2014. Moral Creativity and Creative Morality in Seana Moran, David Cropley and James Kaufman (eds.) *The Ethics of Creativity*, pp. 75-91 New York: Palgrave Macmillan.

Manning, C. and H. Schütze 2001. *Foundations of Statistical Natural Language Processing*. Cambridge, MA: The MIT Press.

Moeran, B. 1984. Advertising sounds as cultural discourse, *Language and Communication* 4 (2), pp. 147-158.

Myers, G. 1994. *Words in Ads*. London: Arnold.

Nakamura, J. 1987. Notes on the Use of Hayashis Quantification Method Type III for Classifying English Texts, *Journal of Cultural and Social Science*, pp. 127-145.

Norton, B. and K. Vanderheyden 2004. Comic book culture and second language learner in B . Norton and K. Toohey (eds.) *Critical Pedagogies and Language Learning.* , pp. 201-221 Cambridge: Cambridge University Press.

Oakes, M.P. 2009. Corpus Linguistics and stylometry in Anke Lüdeling and Merja Kytö (eds.) *Corpus Linguistics: An International Handbook*, pp. 1070-1090 Berlin: Walter de Gruyter.

OHalloran, K.L., S. Tan, B.A. Smith and A. Podlasov 2010. Challenges in Designing Digital Interfaces for the Study of Multimodal Phenomena, *Information Design Journal* 18 (1), pp. 2-21.

Olesen, V. and E. Whittaker 1968. Conditions under Which College Students Borrow, Use, and Alter Slang, *American Speech* 43, pp. 222-228.

Olson, C. 2010. *Digital Convergence Episode 15: Gale Tattersall – Cinematographer, Director of Photography for FOX's House MD*, 30 April. Accessed 3 May 2013 at: http://digitalfilm.tv/digital-convergence-episode-15-gale-tattersall-cinematographer-director-of-photography-for-foxs-house-md.

Park, C.W. and S. M. Young 1986. Consumer Response to Television Commercials: The Impact of Involvement and Background Music on Brand Attitude Formation, *Journal of marketing research* 23 (1), February, pp. 11-24.

Pennsylvania State University *Integrative Arts 10: Film Terminology and Other Resources*. Accessed 29 April 2017 at: https://web.archive.org/web/20180731121030/https://www.psu.edu/dept/inart10_110/inart10/film.html.

Pennycook, A. 2007. *Global Englishes and Transcultural Flows*. Routledge.

Plag, I. 2003. *Word-formation in English*. Cambridge: Cambridge University Press.

Pope, R. 2005. *Creativity: Theory, History, Practice*. London: Routledge.

Radio Times. 2006. *House and Holmes parallels - Radio Times, January 2006 - Radio Times*, Janurary. Accessed 7 July 2014 at: http://web.archive.org/web/20100705103940/http://www.radiotimes.com/content/show-features/house/house-and-holmes-parallels/.

Richardson, K. 2010. *Television Dramatic Dialogue: A Sociolinguistic Study*. Oxford: Oxford University Press.

Sanders, L. 2009. *Every Patient Tells a Story: Medical Mysteries and the Art of Diagnosis*. Kindle.

Sasser, S.L. and S. Koslow 2008. Desperately seeking advertising creativity: Engaging an imaginative" 3Ps" research agenda, *Journal of Advertising* 37 (4), pp. 5-20.

Scott, M. 2014. *WordSmith Tools Manual*. Accessed 20 May 2014 at:

http://www.lexically.net/downloads/version6/HTML/index.html.

Scott, M. and C. Tribble 2006. *Textual Patterns: Key Words and Corpus Analysis in Language Education*. Amsterdam, Philadelphia: John Benjamins.

Sinclair, J. 1982. Reflection on computer corpora in English language in S. Johansson (ed.) *Computer Corpora in English Language*, pp. 1-6 Bergen: Norwegian Computing Centre for the Humanities.

Slate, L. 2006. *Hugh Laurie and Cast Make a House Call*, 17 April. Accessed 7 July 2014 at:

http://web.archive.org/web/20131227083156/http://www.emmys.tv/events/2009/hugh-laurie-and-cast-make-house-call.

Thompson, R. and C. J. Bowen 2009. *Grammar of the Shot*. Amsterdan: Focal Press.

Tognini-Bonelli, E. 2010. Theoretical overview of the evolution of corpus linguistics in Anne OKeeffe and Michael McCarthy (eds.) *The Routledge Handbook of Corpus Linguistics*, pp. 14-27 Abingdon: Routledge.

TV By The Numbers. 2012. *Monday Final Ratings: DWTS, AGT, and  House Retrospective Adjusted Up; Clash of the Commercials Adjusted Down* , 22 May. Accessed 26 November 2017 at:

http://tvbythenumbers.zap2it.com/sdsdskdh279882992z1/monday-final-ratings-dwts-agt-and-house-retrospective-adjusted-up-clash-of-the-commercials-adjusted-down/135303/.

UW Bothell. 2013. *Shot Types - Cinematography - Multimedia Pre-Production - Digital Media - UWB Learning Technologies - UW Bothell*, 9 July. Accessed 29 April 2017 at:

https://www.uwb.edu/learningtech/digital-media/media-pre-production/shot-types.

Verheij, A.J.C. 2000. *Bits, Bytes, and Binyanim: A Quantitative Study of Verbal Lexeme Formations in the Hebrew Bible*. Leuven/Louvain: Peeters Publishers.

Vo, T.A. and R. Carter 2010. What can a corpu s tell us about creativity? in Anne O'Keeffe and Michael McCarthy (eds.) *The Routledge Handbook of Corpus Linguistics*, pp. 302-315 Abingdon: Routledge.

Walter, E. 2010. Using a corpus to write dictionaries in Anne OKeeffe and Michael McCarthy (eds.) *The Routledge Handbook of Corpus Linguistics*, pp. 428-443 Abingdon: Routledge.

Wentworth, H.B. and S. B. Flexner 1960. *Dictionary of America Slang*. NY: Thomas Y. Crowell.

Werts, D. 2009. *Fox's medical marvel stays on top*, 29 January. Accessed 8 July 2014 at: http://variety.com/2009/scene/news/fox-s-medical-marvel-stays-on-top-1117999278/.

West, D.C., A. J. Kover and A. Caruana 2008. Practitioner and customer views of advertising creativity: same concept, different meaning?, *Journal of Advertising* 37 (4), pp. 35-46.

Whitbourne, S.K. 2012. *Were Not Psychologists but We Play Them on Television*, 10 March. Accessed 20 April 2013 at: http://www.psychologytoday.com/blog/fulfillment-any-age/201203/we-re-not-psychologists-we-play-them-television.

Zipf, G.K. 1935. *The psycho-biology of language; an introduction to dynamic philology*. Boston: Houghton Mifflin.