Title: The Nature of Realism Appraisals in Virtual Reality and Television: Protocol for a Systematic Scoping Review

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Abstract

Busselle and Greenberg (2000) conducted a narrative review of the literature on realism judgements in film and television. They reported that there are problems in defining, conceptualising and operationalising realism. With huge changes in both TV and media technology in the last sixteen years, a review of the literature on realism is now necessary. The current protocol outlines the methodology for a scoping review based on Arksey and O’Malley’s (2005) framework and the PRISMA guidelines. The proposed review will focus on the literature on realism appraisals of virtual reality and television. The proposed review then aims to synthesise these under a neurocognitive framework, to address some of the issues in current realism conceptualisations and contribute towards a comprehensive theory of such realism appraisals.

*Keywords*: realism, virtual reality, VR, television, TV, cognitive psychology.
Realism Appraisals of Virtual Reality and Television: Protocol for a Scoping Review. Within the mediated experiences of entertainment, users can always make appraisals on the quality or level of “realism”, i.e. how close it seems to real life. Discussions about levels of realism within media and entertainment take place regularly within both literature and everyday conversations. However, at present there are inconsistencies between realism definitions as well as varying explanations as to how people appraise realism in different media. For example, Hall (2003) identified seven different types of realism upon conducting group interviews with participants about their experiences of realism within entertainment (e.g. plausibility, factuality or perceptual persuasiveness) while Busselle and Bilandzic (2008) differentiated between online, unconscious judgements of realism and memory-based reflections of realism.

In an attempt to address this problem, Busselle and Greenberg (2000) conducted a narrative review of research examining realism in film and television. They reported that realism has been conceptualised in many ways, with many inconsistencies between conceptualisations. They argued that it is unclear whether the dimensions of realism are distinct or overlapping. This argument has since been furthered, with Popova (2010) reporting that each theory of perceived realism has built on the last but continued to add new dimensions. From the literature it seems that the only consensus among psychologists is that as a construct realism is multi-dimensional (Hawkins, 1977; Dorr 1983; Potter, 1992). This is rooted in the argument that judgements of realism cannot possibly be unidimensional when real life itself is not unidimensional (Busselle & Greenberg, 2000; Cho, Shen, & Wilson, 2012; Hawkins, 1977). Despite this agreement of a multi-dimensional realism, research often continues to operationalise and measure realism as a uni-dimensional construct (Busselle & Greenberg, 2000). This may be because realism is often examined as an objective feature of the medium or the technology. Relatedly, Hall (2017) recently noted terms for perception of reality can
vary depending on the format and genre of media under consideration, and include terms such as credibility, believability, realism and authenticity. Alternatively, Rooney and Hennessy (2013) argue that realism needs to be explored as a cognitive, subjective appraisal of the viewer that is integral to the entertainment experience.

Furthermore, research has largely neglected to focus on the online perception of realism as we engage in a media, in favour of knowledge or memory-based realism (Busselle & Greenberg, 2000; Rooney & Hennessy, 2013). However online or apparent realism can greatly influence the entertainment experience. For example, Tan (2008) theorised that perceived inconsistencies in online realism can facilitate or inhibit attention and engagement from the unconscious, flow experience of entertainment to the conscious, executive judgement of the entertainment experience. Busselle and Bilanzic’s (2008) theory purported a similar concept, the “deictic shift” to refer to the shift between unconscious (flow, unawareness of self and identification) and conscious. They noted that realism perceptions can facilitate this shift. Without fully examining the concept of apparent or online realism, research neglects a significant part of the entertainment experience. Here, we propose that realism is best conceptualised and explored as a psychological process that occurs in the context of the media experience, rather than merely a technical feature of the medium.

Why Now?

The landscape of television has drastically changed in the last two decades. TV shows have become more realistic and engaging, while social media has created “television events”. IMDB’s (2016) top rated TV shows largely consist of shows with long story arcs and complex characters such as *Game of Thrones*, *Breaking Bad* or *The Wire*. The way in which people consume TV has also changed, with viewers now likely to binge on large quantities of a show over a fixed period of time (Liebowitz & Zentner, 2012). At the same time there has
been a rise in popularity of “reality TV” such as *Keeping up with the Kardashians, Geordie Shore* and *Big Brother* (Hill, 2005; ITC/BSC, 2003). Now more than ever, the topic of realism is highly relevant to the psychological study of media and entertainment.

Alongside the discussed changes in TV, technology has also greatly changed in the last sixteen years with huge developments in areas like virtual reality (VR) or video gaming. It is worth noting that in contrast to the multitude of studies examining realism judgements of TV, there is a research gap regarding realism judgements of VR. Multiple uses for VR have been extensively explored including motor and cognitive rehabilitation in clinical patients (Weiss, Sveistrup, Rand, & Kizony, 2009), neuropsychological assessments (Parsons & Philips, 2016) and immersive learning (Herrington, Reeves & Oliver, 2007). This body of research remains incomplete without an examination of realism appraisals of VR. With so many potential applications for VR technology it is important to fully investigate the cognitive engagement of users with this technology.

Many different media could serve as a context through which realism appraisals could be examined, such as film, TV, video games, fiction novels or VR. The proposed review aims to explore the literature on realism appraisals of TV and VR, two very different media. Realism appraisals of TV have been extensively researched, while realism appraisals of VR have not. VR is a highly interactive media, while TV is not. The use of TV as a media in the search will allow insight to the breadth of literature examining realism as a concept. The use of VR as a media in the search offers an opportunity to include research on realism appraisals of a virtual, interactive environment. The examples of TV and VR are selected as tools to effectively examine the dimensions of realism as they apply across all media.

*The Current Review*
The proposed review will apply the rigour and methods of a scoping review, which could prove highly useful within the field of realism in entertainment. To our knowledge, no systematic or scoping review has been conducted on realism literature. Busselle and Greenberg (2000) conducted a narrative review of realism literature, while Hall (2017) summarised the various terms for perceptions of reality in media psychology literature. Organisations such as PRISMA, Cochrane Collaboration and QUOROM offer clear guidelines and protocols for comprehensive systematic reviews and scoping reviews. Colquhuon et al (2014) define a scoping review as “a form of knowledge synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence and gaps in research related to a defined area or field by systematically searching, selecting, and synthesizing existing knowledge”. This type of review will offer an unbiased methodology and extensive sample of research, rather than a narrative review which can be biased in both study selection and study aggregation (Kühberger, Scherndl, Ludwig, & Simon, 2016). The proposed scoping review will follow PRISMA guidelines as well as Arksey & O’Malley’s (2005) scoping review protocol to effectively examine literature regarding conceptualisations of realism appraisals of TV and VR.

A focus of this review will be how previous literature has examined viewer’s perceptions of realism. We aim to synthesise different conceptualisations and operationalisations of realism using thematic synthesis (Thomas & Harden, 2008).

**The Review Protocol**

*Research Questions*

RQ1: How has realism been conceptualised across the literature?

RQ2: What are those conceptualisations?
RQ3: What dimensions of realism are identified in the literature?

RQ4: What operationalisations of realism are there in the literature?

Aim

We aim to apply the method of scoping review to a body of published literature, to examine how appraisals of realism have been conceptualised and operationalised in TV and VR. This paper presents a protocol for the scoping review.

Objectives

The main objectives of the review are:

- To bring together a body of literature that has explored realism in TV and VR.
- To identify the way in which realism has been conceptualised and operationalised in this body of literature.
- To categorise the way in which research has assessed viewer *appraisals or perceptions* of realism.
**Study Design**

A scoping study differs from a typical systematic review, in the breadth of literature reviewed (Arksey & O’Malley, 2005). While a systematic review may focus on a very specific research question and identify studies of a specific design, the aim of a scoping study is to map out key concepts underpinning a research area (Mays, Roberts & Popay, 2001). The current scoping review will follow the methodological framework developed by Arksey and O’Malley (2005) and advanced by Levac, Colquhuon & O’Brien (2010). Table 1 demonstrates an amalgamation of steps necessary for validating the protocol and conducting the review.

Once the data have been extracted, we propose conducting a thematic synthesis to ascertain how previous research has conceptualised and operationalised appraisals of realism in TV and VR. Popular theories from media psychology and cognitive psychology may be utilised in order to achieve this.

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<th>Step</th>
<th>Description</th>
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<tr>
<td>1.</td>
<td>Identifying research question</td>
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| 2.   | Development of a protocol in line with PRISMA guidelines.  
|      | a. Review of the protocol by the institutional librarian.  
|      | b. Review of the protocol by independent expert; we will consult with an independent expert who has worked and published in this area and acted as a reviewer of this literature.  
<p>|      | c. Peer review of protocol for publication |
| 3.   | Conducting review adhering to protocol. |</p>
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<th><img src="9" alt="PROTOCOL: SCOPING REALISM REVIEW" /></th>
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<td><strong>4. Dissemination of Findings</strong></td>
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<tr>
<td>a. Identification of potentially relevant studies.</td>
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<td>b. Selection of studies that meet the inclusion criteria.</td>
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<td>c. Data extraction.</td>
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<td>d. Collation, summarisation and report of results.</td>
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**Search Methods**

Following the objectives of the review we will develop a search strategy that is in accordance with the above guidelines. An initial extensive search of the databases will be carried out to gain perspective of the breadth of research in the area. These results will then be refined based on inclusion and exclusion criteria. The reference section of eligible studies will also be searched.

*Electronic Searches*

As the research area is multi-disciplinary, it is expected that the search will garner a large body of research across a variety of journals from the humanities and sciences. Databases relevant to psychology, science, social science, entertainment and technology will all be included in the search, in order to acquire relevant publications in the research area. Having consulted with the institutional librarian the following databases will be included for the search:

1. PsycArticles
2. Scopus
3. Academic Search Complete
4. JSTOR
Search Terms

There are two conceptual components to our search. The first must capture the concept of appraisals/perception of validity or legitimacy in a fabricated experience. A wide variety of terms can be used to discuss appraisals of realism in media. This is one of the reasons why a review in this area is needed. This search aims to amass an unbiased, large sample of the literature on realism. However, it was decided not to use the word “real” in the search terms as it may create an insurmountable amount of results. In order to encapsulate many terms for realism the term “Reali*” will be used. The second component of the search regards the media experience judged to be realistic. This component is essential in helping narrow the potentially huge range of results from the above search terms. Here the following search terms were chosen: “Television, TV, Virtual Reality, VR”. In all searches the terms for these two components will be combined (REALI*) AND (TELEVISION OR TV OR VIRTUAL REALITY OR VR). We will search for articles where these terms appear in the abstract or title.

Inclusion/Exclusion Criteria

It is expected that the above search terms will generate a relatively large, diverse body of research. In order to ascertain a manageable but comprehensive selection of relevant studies the following inclusion/exclusion criteria will be applied. This review aims to examine how appraisals of realism have been conceptualised and operationalised in literature. As Busselle and Greenberg’s (2000) review comprehensively covered the literature up until then, the current search will be limited to research published since the year 2000. Only English language, peer-reviewed papers will be included. The review aims to include literature across different disciplines – empirical research, theoretical or conceptual papers and position papers can all be included. Studies without a title or abstract will be excluded. The proposed review
will focus on realism regarding television (TV) and virtual reality (VR), therefore studies examining realism regarding other media or technology will not be included (video games, films, artificial intelligence). In order to be included, realism must be a variable, an outcome or a focus of the studies.

To obtain a manageable selection of studies and to retain a clear focus in the review, the media (TV or VR) of focus in the paper must include a mediated message of some kind (e.g. narrative or story) to be included. So, for example, papers examining VR as a use for surgical simulation, dental practice simulation or real estate simulation would be excluded.

Where a paper has two or more studies that meet the criteria they will be treated as separate studies, meaning that one study from a paper may be included while another may not. As the various inclusion/exclusion criteria are not necessarily distinct from one another, it will be at the researchers’ discretion to focus on the most obvious or important criterion.

**Search Outcome**

Once the results have been imported into software and duplicates have been removed, the inclusion/exclusion criteria will be applied by screening titles and abstracts. Two researchers will be independently screening. Where it is not clear if a study meets the inclusion criteria based on the abstract, the whole paper will be reviewed. The two researchers will discuss their decisions once all the relevant studies have been identified. A third researcher will arbitrate any potential disagreements.

**Data Extraction**

Once the full body of literature has been selected according to the above inclusion/exclusion criteria, it will be analysed with relevant characteristics compiled. A charting form will be developed to extract the following information:
- General information – title of study, year published, type of study, journal name, journal discipline
- Media details – VR or TV
- Study details – aims, participants
- Methods used
- Conceptualisation of realism
- Operationalisation of realism
- Findings – outcomes, results

This charting will be an iterative process, where the reviewers will continually extract data and update the charting form. The charting form will be applied as a pilot on a random selection of the studies.

Data Synthesis

Thematic synthesis will be utilised for data synthesis – a commonly used method for synthesising qualitative data in systematic reviews. Thematic synthesis includes three steps: coding text line by line, development of “descriptive themes” and generation of “analytical themes” (Thomas & Harden, 2008). We aim to use the thematic synthesis method to capture how realism appraisals have been conceptualised and operationalised in research and to note what themes arise from the analysis. Upon gathering a body of empirical research on realism in TV and VR we will use popular theories from media psychology and cognitive psychology as a lens to interpret the results. Thematic synthesis will allow the researchers to take an inductive approach, observing themes that arise within conceptualisations and operationalisations of realism.

Ethical Considerations
As this review will be conducted using secondary sources, no ethical approval from any formal ethical board will be required.

**Conclusion**

Busselle and Greenberg’s (2000) review identified many inconsistencies in how realism has been conceptualised and operationalised. Since this review, television and other media have greatly changed. Problems have arisen with conceptualising and operationalising appraisals of realism and applying the same frameworks across different media (Popova, 2010). The proposed review aims to build on Busselle and Greenberg’s (2000) review by fully synthesising existing conceptualisations of realism appraisals. Furthermore, we aim to examine realism appraisals using both TV and VR. These two vastly different media offer a rich opportunity to examine similarities and differences in realism appraisals, contributing towards a universal framework of realism appraisals.

Psychology of media and entertainment is a growing, multi-disciplinary field. The need for a multi-faceted, multi-disciplinary approach towards the complex cognitive processes that underlie entertainment engagement is evident now, more than ever. The proposed scoping review aspires to clarify some of the confounding issues in realism research and contribute towards a comprehensive theory of realism.
References


