

# Game Playing and Television Viewing: The Influence of Visual Media on the Acquisition of Behavioural Norms in Children and Adolescents

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## Abstract

This study will explore the influence of media on the acquisition of behavioural norms in children and adolescents. The forms of media discussed in this article are television and video games, which are grouped under the term “visual media”. These visual media can have both negative, or antisocial, and positive, or prosocial, influences on a child’s behavioural norms. Mechanisms explaining these influences are discussed, using the findings of critical and contemporary research. The behavioural norms as mentioned in the article are derived from the ideal image of the child in Western society, and include altruism, tolerance and respect. A highly emphasized antisocial norm in this article is the portrayal of aggressive or violent behaviour. The article concludes with a discussion section, in which implications for future research are explored.

**Keywords:** media influence, behavioural norms, mechanisms, prosocial, antisocial

## Introduction

For children to grow up to be competent social actors in their environment, it is important that they acquire the norms, rules and values of the society they live in (Wilson, 2008). One important mechanism for internalizing these concepts is a child’s observation of others’ behaviour (Wilson, 2008). This mechanism is called *social learning* (Bandura, 1973; as cited in Konijn, Bijvank & Bushman, 2007; Wilson, 2008), which implies that children will imitate behaviour and in that way learn how to act according to societal norms. They are exposed to behaviour not only in real-life settings, but also through different forms of media (ten Brinke & Kanters, this issue). During the past 50 years, the presence of media has grown exponentially in Western society, resulting in children spending many of their waking hours in front of a television or computer screen (Wilson, 2008). For example, it was found that American youth aged 8 to 18 spend an average of about seven hours a day using different types of media (Escobar-Chaves & Anderson, 2008). To state the matter differently; in contrast to earlier days, most of children’s social experiences no longer consist of face-to-face interactions with other people. In this sense, media such as television and video games could be viewed as important sources of children’s socialization (Wilson, 2008), alongside parents, peers and teachers.

In recent years, researchers have increasingly investigated the educational aspect of media (Konijn et al., 2007). Most studies focused on the influence of television or video games. This

focus on visual media is not surprising: specifically those types of media that *enact* certain behaviours could be judged as the most influential on a child’s socialization. After all, as social learning theory states, a child learns by observing and imitating others’ behaviour (Wilson, 2008).

The socialization of important behavioural norms is the aspect of a child’s learning that this article will focus on. Because media are an essential aspect of modern society, it would be interesting to see how media personalities model behavioural norms. The forms of media focused on here, will be television and video games. Thus, where the term “media” is used in the following sections, these specific *visual* media are to be understood, unless otherwise specified. The behavioural norms which will be discussed, are derived from the ideal image of the child in Western society, and will be defined in the next section.

The central debate in this research concerns the question of, whether media influences the behavioural norms that a child internalizes, and whether this influence is a positive or negative one. In other words; can media be used to promote certain valued behavioural norms, and may media be portraying unwanted behavioural norms? The outcome of this exploration will have implications for the broader society. After all; when visual media are defined here as having an important role in the socializing of the child, society can use this visual media to its own benefit but at the same time must also be wary of any negative consequences of media exposure upon the behaviour of children.

### **Behavioural norms**

The behavioural norms investigated in this article are derived from the ideal image of the child in Western society. With its apparently democratic guidelines, Western society seems first and foremost to call for a constructive coexistence of its citizens (Scholte, 2008). Aspects of unity, respect and civility are important, within a framework of cross-cultural understanding. Crucial to the existence and survival of Western society (and any other society) are the attitudes, beliefs, and behaviours of the children and adolescents living in it. These are the children who must grow up, develop, and become socialized within the framework of an ideal image of society (Berry, 2000). To reach the goal of balanced coexistence, it is important to have common norms and values as a base (Durkheim, 1925; as cited in Pickering & Lussier, 1995). Children must acquire these norms and values in order to become fully functioning members of society (i.e., as defined by the society and/or subculture in which they live). To the degree to which a child acts according to these norms and values, he or she approximates society's ideal image of him or her.

The present study will focus on Western society, and several norms are of importance in the constitution of its ideal image of the child. Though countless norms have an important role in socializing children to conform to society's expectations, the behavioural norms discussed here are the ones, that have been most frequently considered in research on media influence (Gentile et al., 2009; Konijn et al., 2007). These norms seem to be significant in reaching the goal of balanced coexistence, because they bear reference to the desired goal of peaceful and productive cooperation. In regard to the positive, or prosocial (Gentile et al., 2009) influence of visual media on the child, the behavioural norms discussed here are *good manners* (i.e. altruism, helping others; Smith, et al., 2006; Wilson, 2008), and *acceptance* or *tolerance* (i.e., of different social groups; for example, groups with different ethnicities or of different sexual orientation) (Cole, Labin & del Rocio Galarza, 2008; Wilson, 2008).

There are many different behaviours present within our society, that are not a part of our ideal image of the child. One behavioural norm that is frequently researched, and that has been linked to negative media influence the most, is *aggression* of the modern child (Konijn et al., 2007). The term

"aggression", as it is used here, means "*behaviour intended to harm another person*" (Escobar-Chaves & Anderson, 2008, p. 165). Because of the continued controversy regarding the influence of television, and especially video games (Escobar-Chaves & Anderson, 2008), on aggressive behaviour in children, this negative norm will be broadly outlined. Different sections of this article will focus on either negative or positive influences that the media may exert on a child's behaviour, with television and video games being addressed separately.

### **Media influence on the acquisition of behavioural norms**

As noted in the introduction to this article, visual media especially can fulfil an educational role for children. Parents these days are not the only educators of their children; they have to share that role with the television and the computer. Social learning theory has already been discussed as a mechanism in the educational functioning of visual media. This theory explains how children can acquire new behaviours by observing the conduct of characters on television. "Information processing theory" clarifies the long-term effects of media exposure (Wilson, 2008). This theory holds that children develop "scripts", which are defined as mental routines that are stored in an individual's memory (Wilson, 2008). Huesmann (1986; as cited in Wilson, 2008) theorizes that children who are exposed to a great deal of violence, either in real life or through the media, will acquire scripts that promote aggression as a way of solving problems (Wilson, 2008). In another article (Mortimer, 1994; p. 17) he asks: "*In a new social situation, how do you know how to behave? You search for scripts to follow. Where is a likely place for those scripts to come from? From what you've observed others doing in life, films, TV.*" It is important to note that the influence of media is not necessarily negative. Information processing theory does not state that children can acquire only negative scripts. As Gentile and his colleagues (2009, p.754) put it: "*If a game includes prosocial content, then prosocial scripts would be likely to be primed and rehearsed*". Thus, it depends on the content of media which scripts or behaviours will be internalized by the child. This content could be either prosocial or antisocial.

To summarize, with social learning theory and information processing theory, it is possible to

clarify how learning behavioural norms in modern society is influenced by media. A vast number of scientific studies have examined this influence of media on children. Nevertheless, far more attention has been given to the possible negative influence of media than to media's potentially positive impact. Since this negative aspect of media influence has dominated the research, the possible positive influence of media has scarcely been acknowledged by researchers and parents (Wilson, 2008). The following sections on television viewing and video game playing will each attempt to show how these two media forms can both positively and negatively influence a child's behaviour. This will help to create a more complete picture of media influence on children and adolescents than the unilateral view of this influence, currently held by many parents and researchers.

### Television

As was mentioned in the preceding section, the theories of social learning and information processing help explain why children can learn from *media*. But what is it about television specifically that makes it stand out as a particularly important educating device for children in today's world? In other words, how is it that television has an educational influence on children's behavioural norms? In this section, several factors will be discussed, including the total time spent watching television, the *cultivation hypothesis* regarding television viewing, and the *mainstreaming effect* on television viewers. Furthermore, the role of television characters will also be addressed.

First of all, the enormous amount of time that children spend watching television is a factor contributing to the educational role of television. According to Chidley, Chu, Driedger and Hawaleshka (1996), Canadian children have spent between 10,000 and 15,000 hours watching television by the time they reach high school. This means that the typical Canadian child has spent more time watching television than going to school, playing sports or talking with his or her parents. Escobar-Chaves & Anderson (2008) note that U.S. youth are now spending one-third of each day with some form of electronic media. Television specifically can these days be seen as the primary source of information for children.

Secondly, the *cultivation hypothesis* has been used to explain the influence of television on children (Morgan, 1982). This hypothesis states that

the more time people spend watching television, the more likely they are to perceive the real world as a reflection of the world as it is depicted on television. Television is said to feed viewers with a continuous stream of mainstream views (Persson & Musher-Eizenman, 2003). When children absorb the mainstream view depicted by the media, it becomes difficult to discriminate the real world from the world as shown in the media. When a lot of violent content is depicted on television, children come to perceive the real world as violent, and when a certain minority group has been negatively stereotyped on television, this can influence the attitudes of viewers towards that minority group (Persson & Musher-Eizenman, 2003). In conclusion, television can cultivate the conceptions children have of social reality, and can therefore influence children's behaviour.

Television depicts a broad array of identities (Konijn et al., 2007). This aspect is especially important for adolescent viewers. Since adolescents are in the process of developing their own identity, they are looking for role models to identify with. Media can play an important part in this process, because it offers a variety of possible identities, in the form of characters, that adolescents can experiment with (Konijn et al., 2007). In short, characters seen on television shows and movies can serve as models for children's behaviour (Chidley et al., 1996). Adolescents in particular are highly imitative and therefore highly sensitive to the influence of visual images. They see media figures as role models and learn to imitate the behaviour of such figures that they view on television.

### *Differences in the effects of viewing television*

It is important to note that the influence of television is not equal for every child. The effect of television varies among children of different ages, gender and socioeconomic status (SES) (Chowhan & Stewart, 2007; Wilson, 2008). For example, the prosocial effect of television increases between the ages of three and seven years old (Wilson, 2008). This may be because prosocial lessons can be difficult to understand for very young children. This is especially true when lessons are provided by means of words instead of action (Wilson, 2008). Furthermore, prosocial television programmes have a greater effect on children in middle- to upper-class families (Chowhan & Stewart, 2007). The negative effects of frequently watching violent television seem to be stronger for low-SES families.

A potential explanation might be that the relatively happy world depicted in most children's programmes fits the world of the more affluent child better (Wilson, 2008).

Besides socioeconomic status, a gender difference is also apparent (Chowhan & Stewart, 2007). For males on the whole, the number of hours spent in front of the television screen is not an important aspect of their acquisition of aggressive norms. For females, however, less television viewing is related to lower aggression scores.

These results of research on differences in the effects of television viewing suggest that a high degree of caution should be exercised whenever one speaks of how television influences children. Each child is different, comes from a different background and experiences the world in a different way. In the discussion section of this article, implications for further research are noted.

### **The influence of television on behavioural norms of children**

Now that it is clear how television can have an educating role in the acquisition of behavioural norms, its actual influence can be explored. The aim of the following section is to see whether television can function as a supportive source in the acquisition of important behavioural norms. These norms are derived from the ideal image of the child in Western society and have already been discussed. After this positive effect of television has been examined, television's potential negative influence on the behavioural norms of children will also be explored. What is meant here by "negative influence" is the promotion of behavioural norms which do not fit the Western society's prevailing image of the ideal child.

#### *Television and prosocial behaviour*

In research and media, far more attention has been paid to the possible negative influence of media than to the potentially positive impact of media (Wilson, 2008). The potential positive influence of media seems to generally be overlooked, but it is a fact that television can be used to teach positive social behaviour as well (Smith et al., 2006).

#### *Altruism*

A frequently studied aspect of prosocial behaviour that can be influenced by television is *altruism*. In broad terms, "altruism" can be defined as a heightened sensitivity to the concerns and needs of

others. Altruism is often thought of as an aspect of *good manners* (see section on "behavioural norms") and altruistic actions generally involve being generous and helpful to others (Smith et al., 2006).

How can television influence the occurrence of altruistic behaviour in children? Social learning theory and information processing theory explain the mechanisms involved. Children watch television programmes in which characters engage in helping behaviour and then imitate these behaviours in situations similar to those seen on television (Wilson, 2008). This learning process does not occur automatically; some factors enhance the probability that children will learn altruistic behaviours from television (Smith et al., 2006). First of all, viewers must attend to the behaviour being depicted. Attention can be influenced by features of the material being viewed, such as the attractiveness of a particular character. Furthermore, children must remember or encode the information given in the situation depicted. This encoding becomes easier when children view a situation repeatedly. Smith and his colleagues (2006) assessed how often types of altruism appeared on television, and in what context these occurred. In a random sample of 2270 television programmes, it turned out that 73% of all shows featured at least one instance of helping or sharing. Furthermore, these acts occurred almost three times an hour. Aside from that, programmes on children's channels outperformed all other channels in both the proportion of shows with altruistic actions and in the rate of altruistic actions per hour. The rates of broadcasted altruistic acts on television are thus very important. Besides frequency, a realistic context and the use of humour in altruistic scenes increase attention and facilitate the encoding process. Finally, a child must be motivated to behave altruistically. Characters getting rewarded for helping or sharing acts increase this motivation (Smith et al., 2006).

Several studies confirm that children who watch prosocial programmes are generally more helpful (Smith et al., 2006). Exposure to programmes with characters that perform altruistic actions may thus teach young viewers prosocial norms about helping and sharing. As Smith and his colleagues (2006) conclude; repeated viewing of altruistic actions strengthens the development of schemas in children involving helping and sharing.

### *Tolerance and acceptance*

Another example of an important behavioural norm in Western society is *tolerance* or *acceptance* of others. This is an especially important behavioural norm in contemporary *multi-cultural* Western society. Through the social learning theory, television can also encourage more acceptance of others among children (Wilson, 2008). Children who often watched educational programmes like *Sesame Street* developed more positive attitudes toward people of different groups than children who did not frequently view such programmes (Wilson, 2008). This may be because these programmes portray children from different racial and ethnic groups interacting with one another. A clear example of this is found in a project in which *Sesame Street* was used to break down cultural stereotypes in Israel and Palestine (Cole et al., 2008). Before they watched the programme, the children expressed an internalized negative stereotype about the other group. Four months after viewing the programme, there was a significant increase in positive perceptions of the other group among the Israeli children. The Palestinian children did not show this improvement. This could be attributed to less exposure to material featuring the other culture in the Palestinian version of the programme (Cole et al., 2008). More exposure to programmes with images of “the other” thus seems to lead to fewer stereotypes and in this way to more tolerance.

Disney movies can also play a role in the development of tolerance of other cultures by showing positive aspects of minority groups. One study analyzed popular animated Disney films and showed that positive portrayals of other cultures can be found, particularly, in the more recent films (Towbin, Haddock, Zimmerman, Lund & Tanner, 2003). The films *Mulan* and *Pocahontas* are given as examples. In *Mulan*, Asian culture is presented in a realistic and positive manner. In *Pocahontas*, the Native Americans are respected because of their peaceful relationship with nature, in contrast to the English, who are shown as engaging in destructive behaviour. It must be noted that these positive images are not often found. In the next section, the negative influence of television will be discussed, including some features of Disney films that are less positive.

### *Television and antisocial behaviour*

A lot of research has demonstrated the negative influence of television on children’s behavioural norms and subsequent behaviour. This research often cites the high amount of violence exhibited on television, something that greatly worries parents, who believe that such exposure is harmful to their children (Wilson, 2008). In the next section, the influence of television viewing on aggressive behaviour will be examined. After that, research is discussed regarding the influence of television on stereotyping and discriminating behaviour among children.

### *Aggression*

Aggression is, by far, the most frequently studied aspect of behaviour possibly influenced by television. What is it that makes violence on television a predictor of aggression in children? According to Sege and Dietz (1994), violence seen on children’s television is a special kind of violence. In addition to the fact that this violence is frequently depicted, it is often portrayed as having no serious negative consequences. Violence is shown on television as a means to resolving confrontations easily and effectively, without a need for patience, negotiations or compromises. Furthermore, television often does not show the long-term negative consequences of violence (e.g., its psychological effects). This kind of violence makes children believe that violence is a solution to problems, that it is a way to resolve conflicts, that it is socially accepted, and that it rarely causes pain (Sege & Dietz, 1994).

The explanation above refers to social learning theory. Sege and Dietz (1994) explain the impact of this theory with reference to three mechanisms. First, the absence of consequences of violent behaviour on television increases the likelihood that violence will be used quickly in real life. Second, heroic characters receive rewards for violent behaviour, which seems to legitimize violence as a means of solving problems. Finally, the frequency with which children view violence and the lack of long-term consequences for the victims of violence in these programmes *desensitize* children, making them less empathetic and thus more prone to using violent means.

Unfortunately, despite many reports that exposure to violence on television is a causal risk factor, the public often is unaware of this risk, and youth exposure to violence on television remains

extremely high (Escobar-Chaves & Anderson, 2008). Wilson (2008) refers to “The National Television Violence Study” (1998), which assessed 3000 programmes over the course of three years. This study found that 60 percent of the programmes contained physical aggression, and that a typical hour of television viewing contained six violent incidents. Furthermore, children’s programmes were found to be more violent than all other programme types. In children’s programmes, acts intended to harm others appear 20 times an hour. Cartoons especially are loaded with violence (Sege & Dietz, 1994). This information makes it easy to assume that children are influenced negatively by television. Escobar-Chaves and Anderson (2008) studied the influence of television on risk behaviours among adolescents and found evidence for the contribution of television to violent behaviour, both in immediate and in long-term contexts. Television programmes depicting violence were found to increase aggressive thinking, as well as aggressive emotions and tolerance for aggression, all of which are risk factors for aggressive and violent behaviour (Escobar-Chaves & Anderson, 2008).

#### *Stereotyping and discrimination*

Television can have another negative influence; it can promote stereotyping and discrimination. As was mentioned before, Disney movies sometimes do portray non-Western cultures in a positive manner (Towbin et al., 2003). Yet this is not always the case. Findings from the study of Towbin and his colleagues (2003) indicate that racial and cultural stereotypes have persisted over time in Disney films. Non-white ethnic groups are rarely portrayed and when they are, it is often in a negative way. This is not only the case for these ethnic groups, it is also true for individuals in other marginalized groups, such as gays (Towbin et al., 2003).

Negative representations of non-dominant cultures were present in ten movies (Towbin et al., 2003). In *Dumbo*, for example, there are images related to slavery, with black workers and a white man in charge. In *Alladin*, the Arabs are portrayed as dirty, cheap and thieving. Furthermore, there is no existence of same-sex relationships in any of the movies studied. In several movies, same-sex affection between men is even considered as something disgusting and worthy of ridicule, creating discriminating ideas about same-sex relationships. Towbin and his colleagues (2003)

declare that parents should assist children in interpreting these movies. Without assistance, the repeated messages may evolve into strongly held internalized beliefs in children (Towbin et al., 2003).

It is important to note here that this negative image of minority groups does not only exist in Disney movies. Berry (2000) refers to several studies that confirm the absence, or negative image, of people of colour in television shows. An important example of the latter is found in news coverage about minority issues. Such coverage often focuses on negative elements of minority communities like youth gangs and violence. The emphasis on such news and the absence of other (positive) news stories about these minority groups, reinforce the negative stereotyping of racial minorities (Wilson and Gutierrez, 1995; as cited in Berry, 2000). Berry (2000) contends that non-recognition and negative portrayals of minorities can have two potential outcomes: It can foster continued prejudice and racism, and it can cause negative self-esteem among members of the minority groups. The former consequence is of particular importance in the context of the current article: Racist behaviour is not considered a positive norm for children in Western society and should not be modelled by any socializing agent.

#### **Video games**

The second form of visual media discussed in this article is the video game. The industry of video games came into being several decades ago, and has grown steadily ever since (Gentile et al., 2009), as video games gained popularity around the world. As an illustration of the pervasive use of video games by today’s youngsters, a recent study has shown that as many as 99% of the American boys and 94% of the American girls play video games (Lenhart et al., 2008; as cited in Gentile et al., 2009). A video game is any type of game that is played on an electronic device, ranging from games on personal computers to games played in arcades or on handheld devices (Baranowski, Buday, Thompson & Baranowski, 2008). Although the time youth spend watching TV still exceeds the time they spend playing video games, the latter is rapidly gaining ground (Escobar-Chaves & Anderson, 2008). In this sense, it is not surprising that much of the research on visual media influences has focused on the role of video games, with respect to both its prosocial and antisocial influences (Gentile et al., 2009). This section will

focus on video game influences on the behaviour of children, starting with the mechanisms involved in this influencing process. After that, separate sections are dedicated to explaining positive and negative influences of video games on children's behavioural norms.

#### *Mechanisms involved in video game influence*

Before examining the influence of video games on behaviour in children, it is important to look at mechanisms explaining this influence. How, and why, can video games have an impact on prosocial and antisocial behavioural norms in children? Five different dimensions of video games are known to be related to the influences these games have on children (Gentile & Stone, 2005; as cited in Gentile et al., 2009). The amount of time spent playing the game and the mechanics involved with playing, for example, will perhaps influence aspects like a child's school performance, weight or motor skills. The third dimension of video games is the structure of the game, which may help a child develop visuospatial skills.

The final two dimensions, however, are specifically important when considering influence on a child's social behaviour. The *content* of game play has been shown to be related not only to aggression, for example, but also to educational skills and prosocial activities (the latter was the case when it was a game focused on helping other players). The *context* of the game, which is the fifth dimension, can have an impact on the effects of the content dimension. For example, a multiplayer game, with a social context, can enhance the effect of game-content on the child, because of the encouragement provided by co-playing peers (Gentile et al., 2009).

The content of video games is examined by several researchers (Gentile et al., 2009). In line with the General Learning Model (Gentile et al., 2009), any stimulus provided in video games will exert both short-term and long-term effects by means of several learning mechanisms. It is obvious how repeatedly playing a video game can teach a child particular gaming skills (short-term effect). But how is it possible that game content can influence behaviour outside of the gaming context? The mechanisms of *priming* (in information processing theory) and *operant learning* become crucial in this matter (Gentile et al., 2009). As was previously mentioned, a child observes behaviour displayed by a model, then learns how to behave

accordingly by creating a *script* of that particular action; this is called *priming* (Bensley & Van Eenwyk, 2001; Gentile et al., 2009; Wilson, 2008). When a more or less similar context occurs, the child will operate according to the learned script. Repeated rehearsal of this script will embed it every more deeply in the child's memory. The internalizing of this behaviour can, in line with the current exploration, be viewed as the acquiring of a certain behavioural norm. After all; when a child learns a specific act for a specific situation, this act is seen as the normal way to behave in that situation; it has become a norm.

The likelihood of the behaviour being repeated depends on the amount of *reinforcement* provided in the game, which triggers the mechanism of operant learning. When, for example, the game a child is playing contains prosocial content, then it is likely that prosocial scripts will be primed and then subsequently repeated when the child is rewarded for prosocial actions (for example by gaining points or going up a level). Even though a child plays a game outside of real-life contexts, he or she can internalize scripts by playing a video game, scripts which can later be used in other settings (Gentile et al., 2009).

Important to note in this matter is that the effect of video game play will be different for children of different developmental levels (Bartholow & Anderson, 2002) just as it was for television viewing effects. Younger children, for example, are less capable of distinguishing fantasy from reality and will thus see the game environment as more of a real-life context than an older child. The poor discrimination in the first age-group will thus lead to priming of exhibited behaviour sooner than in the latter (Bushman & Huesmann, 2001; as cited in Bartholow & Anderson, 2002).

As the following sections will show, research into the effects of video games on children has, for the most part, focused on negative influences (Gentile et al., 2009). But, as this study will attempt to demonstrate, video games cannot just be seen as detrimental to our children's behavioural development. As Gentile and his colleagues (2009; p. 753) put it: “*.the simple good-bad dichotomy frequently posed by the general public (“Are video games bad for children?”) is inappropriate.*” As noted above, several factors need to be included when considering video gaming influences on a child, such as context or content of the video game and developmental level of the

child. Such factors can have a protecting or risk-increasing influence effect on the child. By making this clear, the present study attempts to put media influence in a broader and more complete perspective.

#### *Games and antisocial behaviour*

In this section, one negative influence of games on children's behaviour is discussed, namely the way in which video games promote aggressive behaviour among children (Konijn et al., 2007). The rapidly growing industry of video games, which includes a high percentage of aggressive games (Escobar-Chaves & Anderson, 2008), along with the ongoing debate on the high prevalence of delinquency among youth and adolescents have together led to a great deal of research on a possible relationship between these two factors (Bartholow & Anderson, 2002; Escobar-Chaves & Anderson, 2008; Konijn et al., 2007). Starting about thirty years ago, studies on the possible influence of video game-violence and violent behaviour in real life have repeatedly found some sort of interactional effect (Escobar-Chaves & Anderson, 2008). In this section, research from several theorists is presented to elucidate the relationship between violent games and children's behaviour. The General Aggression Model (Gentile et al., 2009), which explains the mechanism by which video games with violent content influence children, is examined. After that, the experimentation with identities that are portrayed in video games is mentioned as a possible influence (Konijn et al., 2007). This section concludes with a discussion of gender-based differences in the effects of video gaming.

In line with the General Learning Model that was mentioned above, a General Aggression Model has been created to help explain the learning that takes place when children play video games with violent content (Anderson et al., 2007; as cited in Gentile et al., 2009). The playing of a violent video game can lead to more aggressive feelings and behaviour, and in the long run reinforce aggressive scripts and attitudes within the child or adolescent. "Aggression was previously defined as behaviour intended to harm another person (Escobar-Chaves & Anderson, 2008; p. 165) and is seen as a negative behavioural norm, as it goes against society's positively valued behavioural norms of altruism and tolerance (Smith et al., 2006; Wilson, 2008). A distinction is made between different forms of aggression; it being physical (a

physical action against another person), verbal (talking to or about someone with the intention of causing emotional distress) or relational (excluding someone from social groups or activities intended to hurt them) (Escobar-Chaves & Anderson, 2008). Research by Gentile and his colleagues (2009), for instance, showed that the participants who played an aggressive game were more prone to hurt other participants than those who had played a neutral game. This finding indicates that these participants had deviated from the prosocial behavioural norms of altruism and tolerance, and acted more in line with a negatively viewed behavioural norm (i.e. aggression).

Konijn and her colleagues (2007) have a different theory of video gaming influence on aggression. They contend that adolescents are in the process of developing their own identities, and that they try to accomplish this by experimenting with social roles (this was mentioned above in reference to television viewing). In this process, media provide an array of possible characters or characteristics that the adolescent can experiment with. The fact that visual media, like video games, portray a lot of violent characters (e.g., armed warriors) leads adolescents to experiment with violent behaviours (Bensley & Van Eenwyk, 2001). The image of the violent characters in the video game is critical in this matter; characters use aggressive means to achieve their goals, and show no remorse for acting that way. Furthermore, they are not punished for their aggressive actions (Dietz, 1998; as cited in Konijn et al., 2007). In this way, the video games convey the idea that aggression may be helpful in solving problems and that it is socially acceptable. Characters acting aggressively are also often portrayed as being in control of the situation. They play the role of independent, unattached hero (Konijn et al., 2007); "*In video games, "real men" are not "sissies"—they are tough and aggressive.*" (p. 1039). Adolescents, being in the transition period from child to adult, strive to gain that same independence and may come to see aggression as the means to accomplish it. To summarize, considering the modelling function of video games in children's view of the world, this aspect of character modelling can lead to the adolescent acquiring the wrong behavioural norm (i.e., aggression).



#### *Differences in video gaming effects on aggression*

Even though, as we have seen, several recent studies have shed light on the interaction of video games and aggressive behaviour, a possible difference in the effects of video gaming between males and females has yet to be thoroughly investigated (Bartholow & Anderson, 2002). Males have in the past been identified as being more aggressive in general, but the effect of priming and stimulating aggressive behaviour through television may be equally large for both sexes (Bartholow & Anderson, 2002). Research by Bartholow and Anderson (2002) found that young men were more affected by violent video games than young women, in the sense that they set higher punishment levels for their co-players. Possible explanations for this finding include the previously mentioned higher aggression in males, and greater sensitivity to aggression cues (Bartholow & Anderson, 2002).

Considering the findings mentioned above, research on aggression levels in males and females has to be scrutinized with care (Bartholow & Anderson, 2002). There seems to be a difference in the *forms* of aggression which are manifested by the two sexes. Looking back at the forms of aggression as defined by Escobar-Chaves and Anderson (2008), adolescent males seem to be more prone to use direct or physical means of aggression, like hitting, kicking or shoving another person. Adolescent females, on the other hand, use more subtle but often equally detrimental forms of aggression, like telling lies about or ignoring someone, or excluding that person from a social group. These differences in aggression styles between boys and girls can be the effect of stereotyped views of different sex roles, with physical aggression being seen as more appropriate for boys, and verbal or psychological aggression for girls (Bartholow & Anderson, 2002).

Research on sex differences in aggression must take account of these different expressions of aggression in males and females. Adolescent males may be more aggressive than females when only physical aggression is considered, but females might well be found to display more verbal or psychological aggression. Any possible sex differences would also be important within the context of the investigation of behavioural norms in children and adolescents. Future research on the behavioural norms as present in children must take the different aspects of aggression into account, and should differentiate between them when considering aggressive behaviour in children.

To conclude this section on violence in video games, one finding is particularly noteworthy. Research has shown that video game play will not only, in some cases, lead to aggressive behaviour or attitudes, but will also lead to a bias toward selecting violent video games in the future (Gentile et al., 2009). This means that playing violent video games can set in motion some sort of downward spiral; an interplay between violent video games and subsequent aggressive behavioural norms. Playing a violent video game can make a child more prone to choose the same type of game in the future, indicating that the attitude of this child toward aggressive behaviour is slowly changing from seeing such behaviour as negative to seeing it as interesting, and maybe even rewarding or positive (Gentile et al., 2009). It may be that a negative behavioural norm is established through such a process. The ongoing and dynamic relationship between games and behaviour is important to keep in mind when policies for youth's game-play are to be established. This will be addressed further in the discussion section of this article. The next section will demonstrate that the interplay of gaming content and behavioural norms as acquired by children applies to prosocial influences as well.

#### *Games and prosocial behaviour*

The General Learning Model described earlier has provided insight into the possible influence that video games can have on children's behaviour (Gentile et al., 2009). This general model for learning through modelling is a first step in seeing the possible positive, or *prosocial*, influences of video games. Prosocial behaviour is defined as *behaviour intended to help others* (Gentile et al., 2009; p. 754). Considering the importance of video game content, it is expected that prosocial behaviours will be modelled in prosocial video games. Thus, players and/or game characters help each other and support each other without having to use violent means (Gentile et al., 2009). Research on this positive influence of prosocial video games is of great importance. The extended use and enjoyment of these video games by children and adolescents could help in creating healthy behaviour or behaviour change through this form of visual media (Baranowski et al., 2008)

The positive potential of video games lies in the fact that they "...provide a channel for delivering healthy behaviour change experiences

and messages in an engaging and entertaining format” (Baranowski et al., 2008; p. 74). Video games are seen as an important educational medium, where children navigate in virtual environments and act out certain roles. This acting out, which involves controlling events by certain actions and then gaining credit for those actions, is a first step toward priming and internalizing behaviours (Baranowski et al., 2008; Gentile et al., 2009). And, as was mentioned before, internalizing behaviour is the same thing as acquiring a behavioural norm consistent with this behaviour. Baranowski and his colleagues (2008) call the educational or prosocial games “serious video-games” (p. 75), meaning video games that use computer-based entertainment technology to teach, train or change behaviour in children and adolescents. Through narrative and characters, a video game can induce empathetic behaviour, encourage brave and heroic actions, or value loyalty above betrayal (Baranowski et al., 2008). Serious video-games intend to teach the game players these same values, and thus strive to teach them *how* they ought to behave (according to the dominant image of the child).

In a study by Gentile and his colleagues (2009), prosocial and antisocial behaviour was measured in participants after they had played a prosocial, antisocial or neutral game. It turned out that the participants who played a prosocial game were more prone to help others than those who played one of the other two types of games. This indicates that short-term effects were present after playing a game with specific content; a player’s subsequent behaviour could be predicted from the type of video game that was played. On the other hand, long-term effects were found among the participants playing a prosocial game; these individuals displayed higher prosocial traits, and their behaviour, including cooperation and helpfulness, remained more prosocial than that of their co-participants in the other groups. The interactional effect between game-play and behaviour as was found for aggressive behaviour can also be seen in prosocial behaviour. Gentile and his colleagues (2009) found a positive, *upward* spiral for participants playing prosocial video games. Having played that type of game, the participants’ prosocial behaviour increased, and afterward they chose to play prosocial games more frequently than other players.

Again, age is an important factor in research on the influence of video games on

children and adolescents (Baranowski et al., 2008). When video games are to be used as educational means, age-appropriate games have to be developed in order to make games as attractive as possible for children of different ages who display different levels of cognitive and emotional development (Baranowski et al., 2008).

### Discussion

The positive and negative influences of television and video games on the behavioural norms of children have been discussed. It has been made clear that visual media can influence children’s behaviour, their internalizing of certain behaviour and thus their behavioural norms. For both television and video games, several mechanisms and theories were outlined to explain the influencing processes. Considering television viewing, social learning theory and information processing theory were discussed, as well as the cultivation hypothesis, which states that conceptions of social reality are cultivated through television viewing. The frequency of television viewing was shown to be of importance, as was the fact that television exerts an influence through the characters depicted in programmes, who serve as role models for children in general and for adolescents in particular.

In video game play, the dimensions of context and content of the game can be identified as important factors. By playing a video game, scripts that a child uses in order to know how to act in certain situations are internalized by him or her. In addition, the key characteristics in video games, like gaining points or going up a level, can be seen as reinforcers within an operant learning model.

An important conclusion of this study is that television as well as video games can each serve as both a positive and negative source for children in the acquisition of valued behavioural norms. Altruism, tolerance and acceptance are seen as valued behavioural norms and can be positively influenced by television. “Serious video games” can be used to teach children prosocial behaviour. There seems to be an upward spiral that occurs when children play prosocial video games; not only will they learn prosocial behavioural norms. In addition, they will also be more likely to choose a game with prosocial content more quickly in the future. Television can also function as a negative influence upon children who are developing behavioural norms. Aggressive behaviour is not

valued in Western society, but television often rewards aggressive actions and demonstrates aggression as a good solution to problems. Video games also tend to show aggressive characters in a positive light, which may influence the children playing the game. Stereotyping or discrimination, which conflict with the norms of tolerance and acceptance, can also be fostered by television.

The fact that television and video games can influence a child's behaviour has certain implications for both society, and future research. Both television and video games can have a positive influence on the behavioural norms of children. This means that visual media can be used to reinforce positive behavioural norms in children (i.e. it can encourage internalization of those norms that society wants to teach its children). On the other hand, the negative influence visual media can exert on children's behaviour must also be taken into account. If society wants to improve or alter children's behaviour, it might be wise to look at the current offering of television programmes and video games. For example, in order to discourage aggressiveness among adolescents, perhaps the number of aggressive video games needs to be cut back. On a smaller scale, parents can supervise their children's video gaming and television viewing activities in order to make sure that they (i.e., the parents themselves) remain the primary socializing agents of their children.

More research is necessary to further examine the potentially positive and negative influences of television. Television and video games do not influence all children to the same degree. Age, socioeconomic status and gender all play a role in the influence of visual media. Future research should take this into account when considering the influence of media on the acquisition of behavioural norms in children. Ways in which parents and society can benefit most from this influence should be defined. In conclusion, it can be said that media can have a positive influence on the behavioural norms of children. But under which circumstances and in what ways can children benefit most from visual media? And what are the implications of such use of visual media? Another point that was highlighted in the present study was that the negative influence of visual media should not be overlooked, either in scientific research or in governmental policies.

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