THE IMPACT OF DIGITAL MEDIA'S ANIMATED CARTOON SERIES AND FILMS ON SCHOOL-AGE CHILDREN'S COGNITIVE BEHAVIOR

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Abstract

The conduct of children has drastically changed during the previous few decades. Some are turning violent and belligerent. Children are growing more reticent to interact with their parents. Conversely, some people are more emotive, sensitive, sympathetic, and reasonable than others. So, the interogation pops up as- is it the result of research that watching cartoon animation on digital media increases a person's empathy or decreases their antipathy? Does it contribute more to inciting violence and aggressiveness or to fostering empathy in them? Cognitive behavior is defined as mental processes or a few key traits that encourage the mind to focus, pick up new information, or reflect the behaviors necessary for critical reasoning. The senses and the outside world are important components of mental stimulation. The quantity of stimuli that the brain receives has a direct impact on how busy it is mentally.

Keywords: *cognitive behaviour, emotuional bonding, mental health, stimuli*

The Latin words "anima mea" which means soul or life, and "animare" which means to give life to, are the roots of the English word "animation"[1]. The process of giving a character, an object, or any other type of art or graphics movement is called animation[1]. According to Wells (2013), an animation is the process of giving a character, object, or other non-living entity life. No, a soul transplant is not implied. Through their artistic and creative endeavors, animators and artists give life to inanimate objects. How long can people stay in a marble park admiring the beauty of dead sculptures? Everything is carved and formed by sculpting stones, from trees to birds, and none of them move. Still, if they're seated. The illusion of animation, an optical illusion of movement or motion. The interogation may pop up in ourself why this is an illusion or how the appearance of motion or movement occurs. "Persistence of vision of eye" is the response. Indeed, Peter Mark Roget introduced us to the concept of the persistence of vision in the eye in 1824, however it is likely that this idea dates back to classical times as well. To briefly discuss the idea and how it enables us to see motion. It is founded on the actual observation that everything we see only lasts a fleeting moment in our sight. Alternatively, you could say that it is momentarily preserved or stored in our eyes or minds.

When we view individual images at their typical viewing speed, they are distinct still images; but, when a sequence of images moves in front of our eyes at a slightly faster speed, our eyes are unable to discriminate between them as distinct images. The second image entered and built a kind of link between a fast-moving succession of static images, giving the impression of motion because the first image is still in our eyes or minds.Few people, including myself believe, realize that every animated film consists of a series of still images.

In traditional animation, every frame or position must be drawn by hand, however the primary poses, or key poses, and a few in-betweens where there is a direction change must be drawn in computer graphics; the remainder is generated by the software. Tweening is the practice of using specialized animation software to create the in-between or intermediate frames or poses between two keyframes (Sakchaicharoenkul, 2006). The seamless transition from one keyframe to the next is facilitated by tweening which, when combined, provide the impression of motion.These days, a large number of animated films are released annually all around the world. A few well-known and respected studios, such as Disney and Pixar, consistently contribute well and create high-caliber animated films.

Since our early years, all of us have enjoyed watching cartoons and 2D animated films. For the past ten years, 3D animated films have also cemented their place in both our hearts and thoughts and the animation industry.

The term “animation” has been a common known word these days, but animation is not a new concept or idea—in fact, I can say that it is a cave old concept. Yes, we have the evidence to support the conclusion that even the primitive people living in caves during the Paleolithic era, also known as the prehistoric age, or simply the stone age, had the concept of animation or motion in their minds (Connelly and Connelly, 2011).

In 1896, newspaper cartoonist James Stuart Blackton drew some portraits of Thomas Edison, who was conducting experiments for animated films, and was amazed by the speed and accuracy of his drawings. In 1906, they both went on to release a film titled Humorous Phases of Funny Faces (Dewey, 2016). Blackton used a combination of photographs and drawings to create his first animated film, which required around 3000 drawings. It was really popular. As a result, he is regarded as the originator of cartoon animation. Felix In the 1920s and 1928, the song "Cat but a Silent Cat" became popular all across the world. Walt Disney popularized the Mickey Mouse by creating Steamboat Willie, a talking cat that eventually became a household name and gradually replaced the silent Felix. Thus, animation saw a significant and dramatic shift with the arrival of Walt Disney (Lessig, 2004).Disney produced a number of short films, including the first color animation, The Skeleton Dance, and Flowers and Trees with Music.

Disney took animation to new heights when it produced two personality animation films in just five years: Snow-White and the Seven Dwarfs, a feature-length, eighty-three-minute fully animated film that captivated audiences, and Three Little Pigs (Pallant, 2011). Still now nobody could paralelly match those movies via degree of animation. They were clever and profitable. Following that, the animation industry’s Golden Age began, producing amazing films like Pinocchio, Bambi, and Fantasia, as well as Donald Duck and Mickey Mouse shorts. Walt Disney is regarded as the King of Animation as a result.

When we draw something on paper, it is flat and only has length and width; it lacks a third dimension and cannot be rotated or viewed from other angles (Bai et al., 2016). The traditional animation is also two-dimensional, although computer animation is typically discussed in relation to two-dimensional animation.When in turn comes to technology we discuss the use of the program for animation. Flash or its more recent iterations, such as Animate CC or Toon Boom, etc. A sizable selection of well-known studios from the United States to Japan are included in the list of flash animation films. Among the many well-known and recognizable names that have contributed to a significant number of iconic two-dimensional animated films are Walt Disney Animation Studios, Universal Pictures Animation Studios, DreamWorks, Warner Bros. Pictures, Twentieth-century Fox, Nickelodeon, and Columbia Pictures (Willet, 2017).

While 2D is everyone's all-time favorite, 3D has its own appeal. Infact, 3D is increasingly widely used in computer and mobile games, short animated films, 3D web series, and even 3D advertising (Beane, 2012). **3D –** Three-dimensional refers to adding a dimension to two-dimensional information. Add one additional axis, say the z-axis, to make it three dimensional (2d must specify x- and y-axes). With width and height, we have thereby added depth. To create and animate 3D environment elements and characters, 3D software offers a 3D workspace or platform. The third dimension, or depth, is present in the environment and assets of 3D cartoons.They are rotatable and movable in all directions. Imagine a chair in your home that rotates left, right, front, rear, or both. We can also see it from top to bottom and move it while sitting on it. In the same way, we can make any 3D furniture or object move or spin.Children find 3D objects more fascinating as they resemble real-world objects. All age groups find it more enjoyable to play 3D video games, and even all age groups watch 3D animated movies. They are more engaging and have the ability to relate to the characters in 3D animated movies and video games in a way that is true to life (Held et al., 2012).

3D animation software for modeling, sculpting, texturing, lighting, rigging, and rendering is widely available in the animation business. Animation films and video games are made in three dimensions using a variety of software programs, including Autodesk Maya, 3ds Max, Houdini, Unity, Blender, and Modo. According to Flavell

(2011), modeling entails creating or modeling an item, background, environment, character, and asset. In modern era the motion graphics, channel promos, ads, infographics, and explainer videos all heavily require this kind of animation. Motion graphics refers to moving images. Graphics can be any picture, illustration, or visual or schematic depiction of an object (Betancourt, 2020). Imaginative computer graphics or images animated in an engaging and creative way to produce a video that conveys knowledge, a message, or promotes a product, event, concert, or even an election. Motion graphics can be made for amusement, education, or assistance. They can also be made for pleasure. Videos intended for educational purposes include motion graphics. Motion graphics is an animation style that makes use of electronics or technology. It is frequently used to create mobile graphics, channel IDs, movie titles, and broadcast designs (Crook and Beare, 2017). Along with images and pictures, text animation is also used in motion graphics animation.

An engaging artistic medium and way to visually express anything is an animation. We can create animated films for instructional purposes, entertainment purposes, storytelling, or to convey any kind of message or information. In the modern era, animation is also used in video games and on television to visually depict news stories. A minute of animated film is equivalent to 1000 words. Despite its foreign language, the animation is easily understood. There is no linguistic barrier with it. Youngsters adore it and find it easy to comprehend the animated stories, rhymes, and academic teachings. In the modern day, animation has not only become a popular form of entertainment but also a requirement in fields ranging from science to art and education. Let's take a quick look at a couple of them. In every art form such as painting, sketch, symbol, form, or other visual representation—is worth a hundred words, as we all know. Several traffic instruction symbols, such as those for left turns, U-turns, zebra crossings, and many more, can help us comprehend this.

Animation initially had an significance as established in the sphere of entertainment. The original goal of the animation was to produce something thrilling, captivating, and enjoyable. Children's lives revolve around cartoons; they are obsessed with cartoon networks. In light of this, other cartoon networks, like Nickelodeon and Cartoon Network, have been established and air programming day and night. All age groups enjoy watching 2D, 3D, and visual effects movies (Cutumisu et al., 2006). Above all, animated games are the best. Everyone these days enjoys playing video games. Video games have taken over people's thoughts these days, especially those of children and students in the five to thirty age range (Menache, 2000). A variety of goods and services are promoted through commercials and adverts. All-time favorites, animated ads capture viewers' attention more than other forms of advertising.

Animation is used in commercials for children's products, toys, colors, biscuits, chocolates, and other items to capture their interest and focus. Animated ads are frequently more affordable for businesses to use for product advertising than paying big-name actors and movie stars exorbitant sums of money (Jin, 2011). Many advertisements for smartphones, tablets, laptops, and even television commercials for lubrication oils for motorbikes and other vehicles use animation to highlight their functions and inside views. Motion graphics and 3D animation are widely used in these kinds of ads. News- as the visual animation is intuitive. Since it doesn't require words, even critical news stories are presented in animated form on television, frequently including reports of mishaps, accidents, or plane crashes. Because the animated version makes it simple to explain and comprehend how the incident occurred, regardless of the newsreader's language, both young and old can grasp through images (Lo et al., 2017).

Medical**-**Numerous medical organizations are using support animation to demonstrate the operation of certain tools inside the human body as well as the mechanics of medical equipment. In the medical field, animation is used to generate models of entire human bodies and how they function under different conditions for various observations and analyses (Vernon, 2002). These kinds of animations are also crucial for providing the patient with an internal picture of the issue and its resolution.

Criminalistics- Since it examines every facet of crime and how and when it is committed, forensic science—also known as the Science of Crime—plays a crucial role in

criminal investigations. Forensic science can greatly benefit from 3D animation in determining the exact moment and cause of any crime or murder (Girard, 2017). 3D dynamics simulation enables scientists to investigate the direction and acceleration of things under various forces just like in real-life physics. 3D animation software makes it easier to produce realistic 3D models, which are a more accurate portrayal of any person or item.

Cartoons are the most popular type of entertainment for children. There are currently a number of TV networks that show a variety of kid-friendly animated series and cartoons on a regular basis. Children increasingly spend a lot of time in front of digital gadgets and TV sets at home, preferring to watch their favorite characters on smartphones, laptops, and TV. In the past, kids used to spend much of their leisure time playing video games, going on outdoor activities, and interacting with friends.Children's interest in animated cartoons has grown dramatically in the last several years, to the point that it has replaced all other types of entertainment for them. Most babies become avid viewers of cartoons on television by the time they are two or three years old, having begun viewing as early as six months.

When preschoolers watch TV in moderation, it can help them learn stories, poems, and phonetics, among other things. Nature shows teach schoolchildren about wildlife, while the evening news keeps parents informed about what's going on in the world. Animation undoubtedly has the power to be both a fantastic educational tool and a fun pastime. Even so, excessive animation can have negative effects; children who watch TV for more than four hours a day are more likely to be overweight. Youngsters who witness violent crimes are more likely to behave violently and may even start to worry about their personal safety and the safety of others. Cartoon characters may also perpetuate gender and racial stereotypes in addition to often partaking in risky behaviors like drinking and smoking.

What kind of risk do digital media and cartoon television present to young children? Regretfully, it must be admitted that in modern times, this has developed into a serious psychological problem. Addiction to phones and televisions is common among children who use them excessively. Kids spend a great deal of time in front of screens. Some parents watch cartoons and other animated content even when their newborns are eating because they feel it is more easy to feed them while they are watching animated movies (Rossett et al., 2008).

Scholars emphasize the negative impact cartoon characters have on children. They concluded that kids who watch animated cartoons for extended periods of time each day are significantly more aggressive. In addition, individuals are vulnerable to a variety of illnesses and health problems, including mental health conditions like depression, and the likelihood of negative behavior increases over time (Habib et al., 2015).

Children under the age of two (2 years) begin to show a passing interest in cartoons and animated films. They are surprised by moving elements in animated films and they may identify more with the lip synchronization of cartoon characters. They begin to actively watch when they are about three years old. They get the ability to imitate all that they observe, including events, behaviors, and actions. As a result, the vibrant, imaginary characters leave a lasting effect on children, serve as role models for them, and have a significant influence on human psychology. However, cartoons are more important for children between the ages of three and six. These children now pay close attention to it and incorporate what they notice into their conduct. Few parents realize how terrible this situation is, nor how serious their actions are. They find this to be an easy approach to keep their kids entertained while they are occupied with ordinary chores or home responsibilities. When their parents are not available to oversee them, children often watch cartoons all day long. Adults may have no idea how this could impact a child's psychological development.

Experts claim that kids who watch violent cartoons become nervous and act aggressively right away. Some children throw temper tantrums. [3]They have no tolerance and are disobedient. When it comes to cartoon violence, children are more likely to act aggressively and violently, which further has the following effects:

a. they become less empathetic toward the suffering of others;
b. they become indifferent to violence in the real world; and

c. they continue to be insensitive to the suffering of others (Patel et al., 2007).

Kids watch a lot of animated shows, and many of them include violence. Aggression is thus implicitly taught to kids by their friends. As in the animated series “Tom and Jerry” when a mouse and a cat chase one another. Perhaps it would be better to explain to them why this cartoon has a flaw. “Tom and Jerry” is a well-known cartoon and a household name. It’s an fabled parodies; Jerry is fairly wise and perceptive, while Tom is a little dimwitted. In this series, they constantly scuffle with tiny, odd tools, devices, and weapons. Despite the fact that it sounds entertaining, this is dangerous for small children because they are still in the learning phase. and they believe there is no harm in employing these dangerous equipment in real life, finding those activities entertaining and humorous. Though animation is crucial to research and education, we should protect children and students from the harmful effects of animated films and cartoons to prevent them from spoiling. Animation and cartoons are expanding rapidly and have a bright future. Several popular cartoons were considered to have a harmful influence on children's conduct, so much so that it was illegal to air them on television even in the 1970’s. Tom and Jerry were also taken off the air simultaneously in a number of different countries, and the list is extensive. In addition to the regular usage of alcohol and smoke in the cartoon program, there were numerous gunshots, explosions, physical weapons, and other nuisances. A few well-known brands are on the list of animated cartoon shows that are prohibited.

However, cartoon characters typically escape these situations, which some claim gives young viewers the wrong impression that someone can be killed or wounded and still not be hurt. As a result, children grow less sensitive to violence and become victims of violence themselves, which fuels their desire for violence in both real and fictional contexts. Aggression and antisocial behavior are also encouraged by it. Cartoon violence hurts kids because they can't tell the difference between real life and imagination.

In today's cartoons, characters dive, jump, and fall from incredible heights, but they always land safely. As long as the animated series doesn't glorify violence or sex activities, parents seem to be cool with this (Yousaf et al., 2015). On the other hand, many children experience anguish when a character is attacked, stumbles, or is hurt.They felt horrible and began to cry. Thus, watching animated programs aids in their development of empathy. Like their favorite cartoon characters, they want to run, walk, go to school, work hard, sing, dance, play the guitar and piano, and so on. As a result, they also pick up hard work and extracurricular activities.

Kids are able to comprehend and come to the conclusion that fighting is wrong through cartoon shows.This might also aid in their learning of ethics. Additionally, critical thinking and problem-solving skills can be developed through animated cartoon films and series. Youngsters who watch a lot of animated cartoons are better at solving problems. Many animated cartoon programs that place equal emphasis on humor, action, and compassion. They impart compassion, sharing, and empathy. Popular films and television shows like Toy Story, which educate youngsters how to work as a team and help one other find pleasure, are finally teaching kids these valuable life lessons. It’s the Great Pumpkin, Charlie Brown is another exquisite animated short that fosters empathy and enables viewers to comprehend the suffering and emotions of others.

Some of the animations such as The Beauty and the Beast, Seven dwarfs and Snow White, Sideways, Madagascar, Zootopia are bounded with slpendid of morals to educate. Amidst these Zootopia is an excellent tool for educating children about tolerance and discrimination. Animation films and television shows, such as the one previously described, are among the best animation content available today. It teaches children important life lessons like empathy, tolerance, teamwork, sacrifice, and how to be joyful in the little things in life.

Children’s cognitive behavior can be influenced by animated cartoon programs in two ways. Impact might be either favorable or unfavorable. Impact is present, for sure. This addresses the sensitive brains of children, who are still learning how to control their bodies and minds and are prone to mimicking what they observe. [1] The American Academy of Child and Adolescent Psychiatry stresses that parents must keep a careful eye on the materials their

children are exposed to. As per AACAP, parents are required to be present.

Parents have to explain that although the cartoon character or actor who was shot didn't hurt, they would have died or been seriously injured. Parents ought to make an effort to instill in their children the idea that resorting to violence is never the best way to settle disputes. [1]To make cartoons a healthy kind of entertainment as well as a respectable and useful source of education, parents should focus more on showing their kids properly selected cartoons that could have a positive impact on them. The amount of time that children spend watching cartoons and other animations on their phones, laptops, and televisions should be limited by their parents.

A decade ago, the television was the only media available to children, but these days, they can easily access YouTube and other websites on their laptops, mobile devices, and other digital screens. In order to encourage and motivate their children to work hard and develop positive habits and behaviors, parents need to watch their children and select quality cartoons and animation films for them. [5]To ensure that animated films and cartoons don't contain any violent or adult content and don't negatively affect their children or the next generation, parents should watch them.[1] Talk about the animation series' heroes that the kids will watch.One way they will keep their youngster away from violence and assist them profit from animation. Additionally, educators, parents, and elders ought to collaborate in order to mentor and steer children and adolescents toward additional games and physical activities. Games and physical activity are crucial for the improvement of their mental and physical well-being. Additionally, engaging in physical activity keeps children from succumbing to digital addictions and melancholy.

Animation has a significant role in learning and education, as well as in medicine and entertainment, making it an integral aspect of daily life.Therefore, it cannot be disregarded. Let's advocate for animation and highlight its value. filter out and monitor its detrimental effects.

References

1. Wells,P.(2013).*Understandinganimation*. Routledge.
2. Sakchaicharoenkul,T.(2006).MCFI-based animation tweening algorithm for 2D parametric motion flow/optical flow. *MachineGraphics & Vision International Journal*, *15*(1),29-49.\
3. Connelly, J., & Connelly, M. (2011). History ofAnimation.*TechTrends*,*55*(3),6.
4. Azéma, M., &Rivère, F. (2012). Animation in Palaeolithic art: a pre-echo of cinema.*Antiquity*,*86*(332),316-324.
5. Gunning, T.(2014).2:Animating the Instant:The Secret Symmetry between Animation and Photography.In *Animating Film Theory*(pp.37-53).Duke University Press.
6. Smoot, L., Bassett, K., Hart, S., Burman, D., &Romrell,A.(2010,July).An interactive zoetrope for the animation of solid figurines and holographic projections.In*SIGGRAPHEmergingTechnologies*.
7. Yokota,T.,&Hashida,T.(2018).Magiczoetrope: representation of animation by multi-layer 3D zoetrope with asemitran sparentmirror.In *SIGGRAPHAsia2018EmergingTechnologies*(pp.1-2).
8. Cholodenko,A.(2008).The animation of cinema. *The Semiotic Review of Books*, *18*(2),1-10.
9. Dewey,D.(2016).*Buccaneer: James Stuart Black ton and the Birth of American Movies*. Rowman & Littlefield.
10. Graber,S.(2009). *Animation: a handy guide*.A&CBlack.
11. Canemaker, J. (2018). *Winsor McCay: his life and art*.CRCPress.
12. Beckerman,H.(2003).*Animation:The whole story*.Allworth.
13. Lessig,L.(2004).The creative commons.*Mont.L.Rev.*,*65*,1.
14. Pallant,C.2011).*Demystifying Disney: a history of Disney feature animation*. Bloomsbury Publishing USA.
15. deJuan,C.N.,&Boden heimer,B. (2006,September). Re-using traditional animation: methods for semi-automatic segmentation and inbetweening. *Proceedings of the 2006ACMSIGGRAPH/Eurographics symposium on Computeranimation*(pp.223-232).
16. Johnston,S.F.2002,June).Lumo: illumination for cel

animation. In *Proceedings of the 2nd international symposiumon Non-photo realistic animation and rendering* (pp.45-ff).

17. Frank, H.(2016). Traces of the World: Cel Animation and Photography.*Animation*,*11*(1),23-39.
18. Bai, Y., Kaufman, D. M., Liu, C. K., &Popović, J.(2016).Artist-directed dynamics for 2Danimation.*ACMTransactionsonGraphics(TOG)*,*35*(4),1-10.
19. Willett, N. S., Li, W., Popovic, J., Berthouzoz,F.,
20. & Finkelstein, A. (2017, October). Secondarymotion for performed 2danimation. In *Proceedings of the 30th AnnualACM Symposium on User Interface SoftwareandTechnology* (pp.97-108).
21. Beane,A.(2012). *3Danimationessentials*.JohnWiley&Sons.
22. Held,R.,Gupta,A.,Curless,B.,&Agrawala, M.(2012,October). 3D puppetry: a kinect-basedinterfacefor3Danimation.In*UIST*(Vol.12,pp.423-434).
23. Flavell,L.(2011). *Beginning blender: open source 3d modeling, animation, and game design*.Apress.
24. Baran,I.,& Popović,J.(2007).Automatic rigging and animation of 3dcharacters. *ACM Transactionsongraphics(TOG)*,*26*(3),72-es.
25. Strothotte.T.,Schlechtweg.S.(2002). *Non-photo realistic computer graphics: modeling, rendering, and animation*.Morgan Kaufmann.
26. Langlois,T.R.,& James,D.L.(2014). Inverse-foley animation:Synchronizing rigid-body motions to sound. *ACM Transactionson Graphics(TOG)*,*33*(4),1-11.
27. Thomas,A.,&Tufano,N.(2010).Stop motion animation.*DIY media: Creating, sharing, and learning with new technologies*,161-184.
28. Betancourt, M. (2020). *The history of motiongraphics*.Wild side Press LLC. Crook,I., & Beare, P.(2017). *Motion graphics: Principles and practices from the ground up*.Bloomsbury Publishing.
29. Baglama, B.,Yucesoy, Y.,&Yikmis,A (2018). Using animation as a means of enhancing learning of individuals with special needs.*TEMJournal*,*7*(3),670.
30. Cutumisu,M.,Szafron,D.,Schaeffer,J.,McNaughton,M. ,Roy,T.,Onuczko,C.,&Carbonaro,M.(2006).Generating ambient behaviors in computer role-playing games. *IEEE Intelligent Systems*,*21*(5),19-27.
31. Menache,A., (2000). *Understanding motion capture for computer animation and video games*. Morgankaufmann.
32. Jin,C.H(2011). The role of animation in the consumer attitude formation: Exploring its implications in the tripartite attitudinal model. *Journal of Targeting, Measurement and Analysis forMarketing*,*19*(2),99-111.
33. Lo,W.H.,&Cheng,B.K.L(2017).The use of melodramatic animation in news, presence and news credibility: a pathmodel. *Journalism Studies*,*18*(6),787-805.
34. Vernon,T.,& Peckham,D.(2002).The benefits of 3D modelling and animation in medical teaching. *Journal of Audio visual mediain Medicine*,*25*(4),142-148.
35. Yousaf,Z.,Shehzad,M.,&Hassan,S.A.(2015).Effects of Cartoon Network on the behavior of school going children (A Case Study of Gujrat city). *International Research Journal of Inter disciplinary & Multidisciplinary Studies(IRJIMS)*,*1*(1),73-179.