

Media Violence in Cross-Cultural Perspective:
A Global Study on Children's Media Behaviour and
Some Educational Implications

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published in:

Singer, D. and Singer, G. (eds.) (2000, 2002 new edition), Handbook of Children and the Media. Beverly Hills: Sage Publishers

I want you to put more life into your dying.
 Samuel Goldwyn

Media Violence at the Turn of the Century

With incidents like the school-shooting in Littleton in 1999 the media-violence debate has reached yet another peak. The young students who killed many of their school-mates had not only extensively watched violent media content, they had also actively produced hateful web-sites and videos, “announcing” their action. Children in the 21st century are brought up in a media environment where the idea of communication convergence has become reality. There is a permanent cross-over between TV- and internet-content, between computer-games and telecommunication, between editorial media contributions and merchandising. Whereas most of this may serve socially constructive structures, increase of information, facilitation of communication, it of course can also be applied in negative ways. Violence has always been a particularly successful media-market factor: It attracts high attention among male adolescents, its language is universal, with the often simple dramaturgy it can be more easily produced than complex dialogue-based stories. TV was the dominating medium in the life of children during the second half of the 20th century. It was often blamed for having negative effects on the young, but it undoubtedly also created numerous prosocial consequences with programmes like “Sesame Street”, “Mr. Rogers’ Neighbourhood” in the U.S., “Die Sendung mit der Maus” in Germany, or “Villa Klokhuys” in the Netherlands to name but a few.

The year 2000 faces a different situation. TV may still be around, but in most Western children’s lives it is not true any more that one dominating medium is the nearly “single source” for information and passive entertainment. In the new century, people grow up in a “digital environment”. With internet-TV, with technologies like replay, with mobile phones connected to the web, any content is potentially accessible at any given moment in any given situation. In addition, consumers have become “prosumers”, they create and communicate their own media content like the young killers did in Littleton.

However, the media- and media-effects debate in the 20th century has predominantly been a Western, and more specifically an American/Anglosaxon issue. There have been incidents all over the world similar to the Littleton one, e.g., in Brazil, in Germany, in Scotland. However, relatively little research has been conducted concerning a really global approach to media violence. In the 1980s Eron and Huesmann (1986) presented a cross-cultural study with seven countries involved including Australia, Israel, Poland, and the US. In the 1990s, a group of researchers started an international analysis on the

media environment of European children in the tradition of Hilde Himmelweit's landmark 1958 study on television (Livingstone, 1998). But even these and similar studies concentrated on the more developed parts of the world. A really global approach including a representative sample of all cultures, regions, and developmental states of the world was absent.

Apart from a media policy perspective, such a global study is also significant from a scientific point of view: It could identify:

- the impact of different cultural norms on possible media effects
- the interaction between media violence and real violence in the immediate environment of children
- the differences between world regions with a highly developed media landscape and those with only a few basic media available.

In this situation UNESCO decided to initiate a project which would analyse the international importance of the issue. In particular, possible cultural differences, as well as the influence of different aggressive experiences in the actual environment (war and crime) and the different media environments for the children were to be identified. To that end, an intercultural questionnaire study was developed. About 5,000 12-year old boys and girls from 23 different countries around the world participated in the project. This means that this study is the biggest of its kind ever conducted with respect to the number of subjects and countries included. For at least half of the countries involved in this research study, it was the first time that a research of this type had been undertaken.

The Role of Media Violence in Children's Lives

Children and adolescents have always been interested in arousing, and often even violent, stories and fairy-tales (see, a.o., Singer & Singer, 1990). With the arrival of mass-media, film and in particular television, however, the quantity of aggressive content daily consumed by these age groups has dramatically increased. As real violence, especially among the youth at the same time is still growing, it seems plausible to correlate the two, media violence and aggressive behaviour. With more recent media developments, video recorders, computer games and the Internet, one can see a further increase of extremely violent images which obviously find much attention. Videos present realistic torture scenes and even real murder, computer games enable the user to actively simulate the mutilation of 'enemies', the Internet has apart from its prosocial possibilities become a platform for child pornography, violent cults, and terrorist guidelines. Even with these phenomena, however, it is crucial to realize, that still the primary causes for aggressive behaviour will most probably be found in the

family environment, the peer groups, and in particular the social and economic conditions, in which children are raised (Groebel and Hinde, 1991).

And yet, media play a major role in the development of cultural orientations, world views and beliefs, as well as in the global distribution of values and (often stereotyped) images. They are not only mirrors of cultural trends but can also channel them, and are themselves major constituents of society. Sometimes they are even direct means of inter-group violence and war propaganda. All in all, it is important to identify their contribution to the propagation of violence, if one considers possibilities of prevention.

With the technical means of automatization and, more recently, of digitization any media content has potentially become global. Not only does individual news reach nearly any part of the world, but also mass entertainment has become an international enterprise. For example, American or Indian movies can be watched in most world regions. Much of what is presented contains violence. In high literature art, as well as in popular culture, violence has always been a major topic of human communication. Whether it is the Gilgamesh, a Shakespearean drama, the Shuihu Zhuan of Luo Guanzhong, Kurosawa's Ran, stories of Wole Soyinka, or ordinary detective series, man seemed always to be fascinated by aggression. This fascination does not necessarily mean that destructive behaviour is innate; however, it draws attention as it is one of the phenomena of human life which cannot be immediately explained and yet demands consideration of how to cope with it if it occurs. Nearly all studies around the world show that men are much more attracted to violence than women. One can assume that, in a mixture of biological predispositions and gender role socializations, men often experience aggression as rewarding. It fits with their role in society but may once also have served as a motivation to seek adventure when exploring new territory or protecting the family and the group. Without an internal (physiological thrill seeking) and an external (status and mating) reward mechanism men may rather have fled leaving their dependants unprotected. But apart from 'functional' aggression human kind has developed 'destructive' aggression, mass-murder, hedonistic torture, humiliation, which cannot be explained in terms of survival. It is often these, which are widely distributed in the media.

The media themselves differ in their impact. Audiovisual media in particular are more graphic in their depiction of violence than books or newspapers; they leave less freedom in the individual images which the viewers associate with the stories. As the media become ever more perfect with the introduction of three dimensions (virtual reality) and interactivity (computer games and multimedia)

and as they are always accessible and universal (video and Internet) the representation of violence 'merges' increasingly with reality.

Another crucial distinction is that between 'contextrich' and context-free' depictions of violence. Novels or sophisticated movies usually offer a story around the occurrence of violence, what is its background, what are its consequences. Violence as a pure entertainment product however often lacks any embedding in a context which is more than a cliched image of good and bad.

The final difference between the individual media forms concerns their distribution. A theatre play or a novel are nearly always singular events. The modern mass media, however, create a time- and spaceomnipresence. Even here, a distinction between problematic and non-problematic forms of media violence has to be made. A news programme or a TV documentary which presents the cruelty of war and the suffering of its victims in a non-voyeuristic way are part of objective investigation or may even serve conflict-reduction purposes. Hate campaigns, on the other hand, or the glorification of violence stress the 'reward' characteristics of extreme aggression. In general, one can roughly distinguish between three different modes of media content (Table I):

- purely investigative (typically news);
- message oriented (campaigns, advertisement); and
- entertainment (movies, shows).

Table 1: Potentially problematic and non-problematic forms of media content

MODES	INVESTIGATIVE	MESSAGE ORIENTED	ENTERTAINMENT
PROBLEMATIC	Voyeurism	Censorship; propaganda	Rewarded violence
NON-PROBLEMATIC	Classical journalism	Anti-violence campaigns	Stories; thrills

Although, often, these criteria may not be easy to determine, there are clear examples for each of the different forms. Reality TV or paparazzi activities may have to do with the truth but they also, in the extreme, influence this very truth through their own behaviour (see the discussion surrounding Princess

Diana's death). Through the informal communication patterns on the Internet, also, rumours have become part of 'serious' news reporting as the discussion around Bill Clinton and Monica Lewinsky has shown. Whether true or not, deviant groups and cults can influence the global information streams more efficiently than ever before. The cases of Serbia and Rwanda on the other hand have demonstrated the role which 'traditional' mass-propaganda through the radio still can play in genocide.

Finally, many incidents around the world indicate that children often lack the capacity to distinguish between reality and fiction and take for granted what they see in entertainment films, thus stimulating their own aggression (Singer & Singer, 1990). If they are permanently exposed to messages which promote the idea that violence is fun or is adequate to solve problems and gain status, then the risk that they learn respective attitudes and behaviour patterns is very high.

Theories and research studies

Many scientific theories and studies have dealt with the problem of media violence since the beginning of the twentieth century. Most of them originate in North America, Australia/New Zealand or Western Europe. But increasingly, Asia, Latin-America and Africa are contributing to the scientific debate. The studies cover a broad range of different paradigms: cultural studies, content analyses of media programmes, behavioural research. However, the terms aggression and violence are exclusively defined here in terms of behaviour which leads to harm of another person. For phenomena, where activity and creativity have positive consequences for those involved, other terms are used.

Recently, scientists have overcome their traditional dissent and have come to some common conclusions. They assume media effect risk which depends on the message content, the characteristics of the media users, and their families, as well as their social and cultural environments. All in all, children are more at risk of being immediately influenced than adults. But certain effects, like habituation, also hold for older age groups. While short-term effects may be described in terms of immediate causal relationships, the long-term impact is more adequately described as an interactive process which involves many different factors and conditions. Yet, as the commercial and the political world strongly rely on the influence of images and messages (as seen in the billion dollar turnover of the advertising industry or the important role of media in politics), it seems naive to exclude media violence from any effects probability.

The most influential theory on this matter is probably the Social Learning Approach by Albert Bandura (1977) and his colleagues. As much of what people learn happens through observation in

their immediate environment it can be concluded that similar processes work through the media. Many studies have demonstrated that children especially either directly imitate what they see on the screen or they integrate the observed behaviour patterns into their own repertoire. An extension of this theory considers the role of cognitions. If I see that certain behaviour, e.g. aggression, is successful, I believe that the same is true for my own life. Groebel and Gleich (1993) and Donnerstein (1997) both show in European and US-American studies that nearly 75% of the aggressive acts depicted on the screen remain without any negative consequences for the aggressor in the movie or are even rewarded. The Script Theory, among others, propagated by Huesmann and Eron (1986), assumes the development of complex world views ('scripts') through media influence. If I over-estimate the probability of violence in real life (e.g. through its frequency on the TV-screen), I develop a belief system where violence is a normal and adequate part of modern society. The role of the personal state of the viewer is stressed in the Frustration-Aggression Hypothesis (see Berkowitz, 1962). Viewers who have been frustrated in their actual environment, e.g. through been punished, insulted, or physically deprived, 'read' the media violence as a signal to channel their frustration into aggression. This theory would explain why in particular children in social problem areas are open to media-aggression effects.

The contrary tendency has been assumed in the Catharsis Theory, and later the Inhibition Theory by Seymour Feshbach. As in the Greek tragedy, aggressive moods would be reduced through the observation of similar tastes with others (substitute coping). Inhibition would occur when the stimulation of own aggressive tendencies would lead to learned fear of punishment and thus contribute to its reduction. While both approaches may still be valid under certain circumstances, they have not been confirmed in the majority of studies, and their original author, Feshbach, now also assumes a negative effects risk.

A lot of the fascination of media violence has to do with physiological arousal. The action scenes, which are usually part of media violence, grab the viewer's attention and create at least a slight 'kick', more probably among males. At the same time, people tend to react more aggressively in a state of arousal. This would again explain why arousing TV scenes would lead to higher aggression among frustrated/angered viewers, as Zillmann (1971) explains in his Excitation Transfer Theory. In this context it is not the content but the formal features, sound and visual effects that would be responsible for the result. Among others, Donnerstein, Malamuth, and Linz have investigated the effect of long-term exposure to extremely violent images. Men in particular get used to frequent bloody scenes, their empathy towards aggression victim is reduced.

The impact of media violence on anxiety has also been analysed. Gerbner (1993) and Groebel (Groebel & Hinde, 1991) both have demonstrated in longitudinal studies that the frequent depiction of the world as threatening and dangerous leads to more fearsome and cautious attitudes towards the actual environment. As soon as people are already afraid or lack contrary experiences they develop an Anxious World View and have difficulties in distinguishing between reality and fiction. Cultural Studies have discussed the role of the cultural construction of meaning. The decoding and interpretation of an image depends on traditions and conventions. This could explain why an aggressive picture may be 'read' differently, e.g. in Singapore than in Switzerland, or even within a national culture by different groups. These cultural differences have definitely to be taken into account. Yet, the question is, whether certain images can also immediately create emotional reactions on a fundamental (not culture-bound) level and to what extent the international mass media have developed a more homogeneous (culture-overspanning) visual language. Increasingly, theories from a non-Anglo-Saxon background have offered important contributions to the discussion.

Groebel has formulated the Compass Theory; depending on already existing experiences, social control, and the cultural environment, media content offers an orientation, a frame of reference which determines the direction of one's own behaviour. Viewers do not necessarily adapt simultaneously to what they have observed; but they measure their own behaviour in terms of distance to the perceived media models. If extreme cruelty is 'common', just kicking the other seems to be innocent by comparison if the cultural environment has not established a working alternative frame of reference (e.g., social control, values).

In general, the impact of media violence depends on several conditions: media content - roughly 10 acts of violence per hour in the average programming (see the recent US National TV Violence Study by Donnerstein & colleagues, 1997); media frequency; culture and actual situation; and the characteristics of the viewer and his family surrounding. Yet, as the media now are a mass-phenomenon, the probability of a problematic combination of these conditions is high. This is demonstrated in many studies. Based on scientific evidence, one can conclude: the risk of media violence prevails.

Method and design of the UNESCO study

A study that is to be conducted in different countries and cultures faces several problems. The logistics are difficult; many countries do not have scientific faculties that could run the study there; the cultures are so different that not only language problems but also differences in the social meaning of terms appear. Therefore the authors of this project chose a standardized procedure. All logistics were

centrally organized by the World Organization of the Scout Movement from their Geneva headquarters. The organization used their international network of National Scout Organizations to conduct the study in the respective countries. However, those who filled in the questionnaires were average children from a representative sample of the respective participating countries. To that end, two officers of the Scout Movement travelled to the countries in the sample (see below) and instructed their local representatives in how to apply the procedure. In addition, the World Scout Organization took care of the translations into the different national languages and the necessary pre-tests in each country. The advantage of the Scout Movement, apart from its logistics, is its strict political and ideological independence. Thus, no intended or unintended interference based on a certain belief system was to be expected.

Although language and meaning are always culturebound we chose a questionnaire-procedure to analyse the relationship between media preferences and aggression. By applying exactly the same questions all over the world a maximum comparison was possible. As we limited the items to descriptive, preference and behavioural data, excluding evaluations and performance measures, we assume a relatively culture-independent measurement. Of course, systematic differences in preferences are indicators of cultural specifics. That was exactly what we wanted to measure. The reliability and the validity of the data are not reduced through that approach. The regional pre-tests demonstrated that all children could understand the questionnaire which they had to fill in during classes and that all items were meaningful to them. Of course, without financial and time constraints, an even better pretesting would have been possible. However, the a posteriori analyses confirmed the quality of the work.

The questionnaire itself consisted of a mixture of text-questions with mostly multiple-choice answers and very simple (again, culture-free) sketches which depicted a number of social situations. The children then had to choose between several options, e.g. an aggressive or a peaceful solution to a depicted conflict. Several factors were investigated: the children's demographics, their social and family situation, media use and preferences, level of aggression in their environment, their own aggressive tendencies, level of anxiety, and their perception of values and orientations. All in all, 60 different variables were included.

The sample for the study consisted of an original core group of 23 different countries around the world, where, depending on country-size, between 150 and 600 12-year old school children (boys and girls) were to be investigated respectively. The countries were selected to represent different region and social development structures, cultures, and economic and social circumstances. After finishing the remaining core data, 5,500 international 12-year-olds contributed to the project. The participating countries were: Angola, Argentina, Armenia, Brazil, Canada, Costa Rica, Croatia, Egypt, Fiji, Germany,

India, Japan, Mauritius, the Netherlands, Peru, Philippines, Qatar, South Africa, Spain, Tadjikistan, Togo, Trinidad & Tobago, and Ukraine.

A quota-sample was used, which considered three criteria: gender; age; rural versus metropolitan environment; high versus low level of aggression in the students' actual environment.

With the last two, the sample was systematically structured. Gender was assumed to be equally distributed across the schools. In addition, the types of school were nationally chosen to represent the respective school systems.

The age was fixed at 12 years in order to standardize possible developmental effects. Many studies have dealt with age differences, and the age of twelve seems to be a period where the interest in media is particularly high, at the same time children are still in the process of socialization. At this age children start to become adolescents and are particularly interested in adult role models and respective media images. Of course, 'psychological age' and maturity may differ interculturally but still fundamental developmental stages are valid across cultures, as many studies have shown. In any case, we decided to standardize the age factor.

The gathering of the data started in late 1996 and finished in early 1998.

The results

About 350,000 individual pieces of data were obtained and processed (more than 5,000 students with more than 60 variables each.) In the first step, simple analyses were applied, in order to get a general overview of the demographics, the global media use, and the state of violence among children around the world. In addition, first indicators of the correlation between media use and individual aggression were obtained. In this stage, most results are based on frequency- and percentage-tables plus a few cross-tabulations.

Demographics

Global statistics

2,788 boys and 2,353 girls participated in the study; all were 12 year olds. Boys (54.2%) are slightly over represented compared to girls (45 %). However, this was intended as we regarded boys as the bigger risk group.

About 80% of the children live with both parents, 13% only with their mother, 2.5% only with their father. The remainder live with relatives, in orphanages, or alone. Forty-nine percent live in a big city, 28% in a small town, 20% in little villages, the remaining 3% in camps or isolated houses. The majority of children have fathers who work as employees, 10% do not know their father's profession (as they may not know him). About 9% of the children already have experienced fleeing a country. Nearly 40% of the mothers around the globe take care of the household as their primary profession. Most children live in small to medium-size families either alone with their parents or with just one or two more brothers or sisters (about 90%). About one third of the children were rated (by the local Scout representatives) to live in an aggressive environment or to face problems. The originally proposed 50% match could not be reached as several countries seem to have hardly any such area, which could be easily identified.

Regional differences

We concentrated on four regions', not the individual countries: Africa, Asia/Pacific, Europe/Canada, and Latin America. By doing so, we brought together areas which between themselves may differ immensely. We 'merged' Europe and Canada as we assumed some common cultural roots. This of course is also partly true for Europe and Latin-America. However, for Latin-America there were sufficient numbers of countries to form their own cluster. In any case, this clustering was not more than a first testing of rough cultural differences or overlaps.

Some results

Africa has the fewest children of our sample who live together with both parents (app. 72%), Asia the most (88%). Latin-America (75%) and Europe/Canada (83%) are in between. Asia has the most children living big cities (56%), Europe/Canada (43%) the least.

Africa has the most refugees (12%), Latin-America the least (4%).

Not all of these numbers may fit with an objective global count, but some regions were not accessible at all; we also could only investigate children who were able to read. Yet, for the purpose of the study the data seem to be sufficiently valid.

A remarkable difference appeared with respect to the mothers' profession: while in Latin-America 51 % and in Asia 55% of the mothers were reported to take care (exclusively) of the household, the numbers for Europe/Canada are 33% and for Africa 9.9%. For different reasons, most mothers in these two regions also work in other positions (take care of everything; are employed).

All the countries taken together represented the complete UNDP(United Nations Developmental Program)-index range

Media use

Global statistics

Of the school areas in our sample, 97 % can be reached by at least one TV broadcast channel. For most areas the average is four to nine channels (34%), 8.5% receive one, 3% two, 9% three channels, 10% ten to twenty, and 18% more than 20 channels. The percentages are minimum values, as 17% did not answer this question.

In our global sample, 91 % of the children have access to a TV set, primarily at home. Thus, the screen has become a universal medium around the world. Whether it is the 'favelas', a South Pacific island, or a skyscraper in Asia, television is omnipresent, even if we consider that we did not cover some regions where TV is not available at all. This result justifies the assumption that it still is the most powerful source of information and entertainment outside face-to-face communication. This is confirmed by further statistics. Even radio and books do not have the same distribution (91%, 92%).

The remaining media follow some way behind: newspaper 85%; tape recorder (e.g. cassette) 75%; comics 66%; video recorder 47%; video games (like 'Gameboy') 40%; PC 23%. Internet 9%.

The children could report how much time they spend with several favourite activities. They spent an average of 3 hours daily in front of the screen. That is at least 50% more time spent with this medium than with any other activity including home-work (2 hours), helping the family (1.6 hours), playing

outside (1.5 hours), being with friends (1.4 hours), reading (1.1 hours), listening to the radio (1.1 hours), to tapes/CDs (0.9 hours), or using the computer (0.4 hours, for whom it applies).

Thus, TV dominates the life of the children around the globe.

Regional differences

Europe/Canada have the highest distribution of TV (nearly 99%), Africa the lowest (83%). Actually in our study the distribution of TV may be overrepresented for Africa, as we did not consider non-school groups or areas without any electricity available. Latin-America comes a close second after Europe/Canada (97%), Asia has 92%. The order is roughly the same with most other audiovisual media, like video, PC, games, (see the numbers under global statistics). Radio still plays an important role in Africa, where the percentage is similar to Europe/Canada and Latin America (app.90 %) and is slightly higher than in Asia (88%)

Orientations and values

Global statistics

The emotional states, as well as the ideals are important factors which moderate how children cope with their environment, and how they evaluate what they observe in the media. Of course, the media themselves can influence these states and norms.

What is the general emotional state of the children? About two-thirds report that they are happy most of the time. About one-quarter know the feeling, but do not regularly experience it, about 2.5% say that they are never happy. There is no difference between boys and girls. Nearly half of the children are anxious most of the time or often, with again no difference between boys and girls. About 17% of the children report that they would like to live in another country (either for adventure or for escapism reasons). Although the majority of the children are relatively happy a remarkable number live in a problematic emotional state.

Which kind of people are perceived as role models by the children? They could give a name which then was ordered along a list of different characteristics. The results again demonstrate the importance

of the media. Most children (26%) name an action hero, followed by pop stars and musicians (18.5%). However, there are important gender differences. Of the boys, 30% mention an action hero, as compared to 21 % of the girls. But for the female group this character comes second after pop stars/musicians (girls: 27%, boys: 12%). Other personalities play a less important role: About 8% name a religious leader, 7% a military leader (boys: 9%, girls: 3.4%), 6% a philosopher/scientist, 5% a journalist, and only 3% a politician. The remaining are personal acquaintances or have other roles. This confirms the global trend: action heroes and popstars are the favourite role models among children. Nevertheless, religious beliefs are still widely spread: about 90% of the children report that they believe in [a] god.

Which are the personal values of the children? The favourite wish of 40% is to have a family, because they either live in a functioning parent-child relationship or because they lack it but would like to have it. For 10% enough food is the favourite. This may mean that this group regularly experiences food-deprivation. For 25 % of the boys the favourite wish is always to be a winner, 19% of the girls say the same.

Regional differences

The emotional states seem to differ somewhat between the world regions. While happiness is more or less equally distributed (with Latin-America being a little 'happier' than Africa, Europe/Canada, and Asia, in that order), remarkable differences occur when it comes to being anxious. Around 50% of the children in Africa, Latin-America, or Asia are (very) often anxious as compared to about 36% in Europe/Canada. There are regional differences between the favourite heroes: Asia has the highest ranking for action heroes (34%), Africa the lowest (18%), with Latin-America and Europe/Canada in between (25% each). This may have to do with the significantly lower saturation of audiovisual media in Africa, but may also have other cultural reasons.

However, there is a clear correlation between the presence of TV and reporting action heroes as favourites. The favourites in Africa are pop stars/ musicians (24%) with Asia the lowest (12%). Africa has also high rankings for religious leaders (18%), as compared to Europe/Canada (2%), Latin-America (6%), and Asia (6%). Military leaders score highest in Asia (9.6%), and lowest in Europe/Canada (2.6%). Journalists score well in Europe/Canada (10%), low in Latin-America (2%). Politicians rank lowest in Europe (1%), highest in Africa (7%). Again, there may be a correlation with the distribution of mass media: the more TV, the higher the rank of mass-media personalities, and the lower the traditional ones (politicians, religious leaders). In Europe/Canada, journalists get ten times

as many votes as politicians. There is a strong correlation between the accessibility of modern media and the predominant values and orientations.

Violence and aggression

Global statistics

As reported, roughly one-third of the children in our sample lived in a high aggression environment or problematic neighbourhood. This ranks from high crime areas and (refugee) camps to economically poor environments, which, of course, do not have to be aggressive per se. Yet, in these areas, more than twice as many people seem to die of being killed by others than in the low-problem neighbourhoods (children's reports: 16% versus 7%). Again, twice as many children there are a member of an armed gang (5.2%) as compared to the low-aggression areas (2.6%). They report more personal enemies (9% versus 5.9%) and regard attacking more often as fun than the children from the low-aggression neighbourhoods (8% versus 4.7%). They also have used weapons against someone more often (7.5% versus 5.5%). Thus, it comes as no surprise, that they are also more anxious (most of the time: 25% versus 19%), and would like to live in another country (53% versus 46%). But they also report a similar happiness as the low-aggression group.

However, their world view is obviously influenced by their experience: Nearly one-third of the aggression-environment group believe that most people in the world are evil (compared to slightly more than a fifth of the low-aggression-area group). The pattern is clear and plausible: in high problem areas, children do not only experience more aggressive behaviour, they are also emotionally and cognitively affected: more hedonistic violence, more anxiety, a more pessimistic world view.

Regional differences

Different forms of aggression are evaluated differently in the cultures of the world. We wanted to know whether a physical attack or a verbal insult is perceived as more 'damaging'. The results confirm the cultural differences. In Europe and Canada, children regard a physical attack with fists as worse (55.5%) than being called insulting names (44%). In Asia, the opposite is the case. For nearly 70%, verbal insults are worse than physical attacks (29%). Latin-America is balanced (50% each). Africa is similar to Asia (verbal 60%, physical 35%).

To classify different forms of aggression, we presented a number of simple sketches which showed a variety of social situations: a verbal conflict, a physical attack, a recorder damaged by another child, a stereo which a child urgently wanted to have, a group of people hanging around. For each of these situations, the children should say, how the involved persons would react, and what they themselves would do in a similar situation.

In situations of social conflict, children in Africa reported most frequently that they would regard physical attacks as adequate reaction: e.g., 32% hitting the other as reaction to verbal insult (Asia 15%, LatinAmerica 14%, Europe/Canada 16%); 9% even reported shooting the other as adequate. Nearly one third in Africa reported, that a group of people hanging around would attack another group as the next action (Asia 28%, Europe/Canada 20%, Latin-America 19%). At the same time, children in Africa experience having a gun as a powerful feeling more often than in the other regions (25%; Latin-America 18%; Europe/ Canada 18%; Asia 10%). They also report that they themselves have a gun more often (4.5%; Latin-America 3.5%; Asia 3.3%; Europe/Canada 2.4%). In general, children in Africa and Asia have twice as often used a weapon against someone (7.1 %; 8.3%) as those in Latin-America and Europe/Canada (4.4%; 3.6%).

All in all, the children's aggressive behaviour patterns and perceptions are a mirror of what they experience in their real environment: frustration, aggression, problematic circumstances. However, to what extent do the media contribute to these patterns? To what extent do they channel the already existing aggressive dispositions?

Media violence

Most studies show that the relationship between media violence and real violence is interactive: media can contribute to an aggressive culture; people who are already aggressive use the media as further confirmation of their beliefs and attitudes, which, in turn, are reinforced through media content. This interaction is especially true for long-term developments.

At this stage of the study, we can offer some correlations between media and 'real' violence. A one-directional effect cannot be assumed on the global level and could also not be empirically tested. The study focuses on the role of the media in the complex system of culture and personal experiences.

To identify the relationship between media- and actual experiences for high- and low-aggression environments we asked the children whether what they saw in the media resembled their own experiences. In all cases, the high-aggression-area group reported a stronger overlap between reality and fiction than the low-aggression-area group (movies: 46% versus 40%; TV: 72% versus 69%; radio: 52% versus 48%; comics: 26% versus 22%; all in all not an extreme, but homogeneous trend). Thus, they are more probably confronted with similar aggressive messages in their actual environment and in the media than children from a less violent neighbourhood.

Obviously, media content reinforces the already mentioned belief that most people are evil. Many children are surrounded by an environment where “real” and media experiences both support the view that violence is natural. The fascination of violence is often related to strong characters who can control their environment, are (in the end) rewarded for their aggression, and can cope with nearly every problem. The message is at least threefold:

- aggression is a good means to solve conflicts
- aggression offers status
- aggression can be fun.

The larger-than-life hero of course is an old theme of art and literature. It serves both needs, the compensation of one's own deficits, and the reference point for one's own behaviour. Relatively new, however, is the global uniformity of such heroes through the mass media and their commercial weight. One such media figure is the Terminator character from two movies of the same name, starring Arnold Schwarzenegger. Our results confirm that Terminator is a cross-cultural hero. About 88% of the world's children population (if our sample is representative) know him. In the comparison between high- and low-aggression areas it is remarkable that 51 % of the children of the high-aggression environment would like to be like him as compared to 37% in the low-aggression neighbourhoods. He seems to represent the characteristics which children think are necessary to cope with difficult situations. Equally successful are heroes like 'Rambo', and of course 'local' heroes from the respective domestic media markets, e.g. India, Brazil, or Japan. An aggressive media hero is particularly 'successful' as role model in the more violent areas of the world. Some of these heroes have become culture-overspanning icons.

Are there any systematic patterns in the aggressive cognitions which link personal motives, actual environment, and media content? We analysed the correlation between different forms of sensation seeking (the motive to be thrilled through risk and adventure), a relatively stable personality

characteristic, on the one hand, and different actual and media environments on the other. There was no difference in sensation seeking in the high- and the low-aggression environment. That is plausible, as this personality characteristic is assumed to be highly genetically determined, thus relatively free of environmental influences. However, when we split up the sample into a group with a comparatively well developed technological infrastructure and one with a less well developed one (criterion: distribution of computers, then 'median'-split = 50% high/low dichotomy), the picture changed. Twice as many children in the 'high technology' group as in the 'low technology' group reported a risk-seeking tendency (20% versus 10%).

Regional differences

In terms of regions, Africa has by far the lowest (7.3%), Europe/Canada (18.9%), the highest scores, with Asia (18.5%), and Latin-America (15.9%) following close. This may have to do with two aspects:

the sensory stimulation is probably higher in high-technology environments; it thus creates a generally higher state of permanent arousal; with a higher availability of media programming, the risk-seeking tendency is modelled into uniform patterns which mirror the content of the media (e.g., the car chase as a movie icon).

To test the latter, we linked the sensation-seeking tendency in an additional analysis with the preference for media content. The picture is clear. Children, and in particular boys, with a risk seeking tendency have a higher preference for aggressive media content than those who lack this tendency (boys: 40% versus 29%). When asked, whether they would themselves want to be involved in an aggressive situation, the tendency was even stronger: 47% of those who prefer aggressive media content would also like to be involved themselves in a risky situation (as compared to an average of 19% with other media preferences, range: 15% 23%). In the recent analysis, this result comes closest to a direct effects measure: there is a link between the preference for media violence and the need to be involved in aggression oneself.

The overall result can be interpreted as follows: the tendency of sensation-seeking is possibly genetically determined (with an extremely strong gender influence(25% of the boys, but only 4/o of the girls report risk-seeking!). The level and direction of this tendency, however, is moderated through the environment. When violence is presented as 'thrilling' in the daily media-environment, this reinforces the 'reward characteristics' of the respective behaviour. When children actually experience violence in their immediate environment, the hedonistic value of heroism makes place for its 'survival'-value (see

the action hero results). Thus, depending on the 'real' environment, media violence can serve different functions. Nevertheless, in both cases it confirms the 'reward-characteristics' of aggressive behaviour.

Conclusions and recommendations

At this stage, we can summarize the role of the media for the perception and application of aggression as follows:

- Media violence is universal. It is primarily presented in a rewarding context. Depending on the personality characteristics of the children, and depending on their everyday-life experiences, media violence satisfies different needs:
- It 'compensates' own frustrations and deficits in problem-areas.
- It offers 'thrills' for children in a less problematic environment.
- For boys, it creates a frame-of-reference for 'attractive role-models'.

There are many cultural differences, and yet, the basic patterns of the media violence implications are similar around the world. Individual movies are not the problem. However, the extent and omnipresence of media violence contributes to the development of a global aggressive culture. The 'reward-characteristics' of aggression are more systematically promoted than non-aggressive ways of coping with one's life. Therefore, the risk of media violence prevails.

The results demonstrate the omnipresence of TV in all areas of the world. Most children around the globe seem to spend most of their free time with the medium. What they get is a high portion of violent content.

Combined with the real violence, which many children experience, the probability is high that aggressive orientations are promoted rather than peaceful ones. But also in lower-aggression areas, violent media content is presented in a rewarding context. Although children cope differently with this content in different cultures, the transcultural communality of the problem is the fact that aggression is interpreted as a good problem-solver for a variety of situations.

Children want a functioning social and family environment. As they often seem to lack these, they seek role models which offer compensation through power and aggression. This explains the universal success of movie characters like Terminator. Individual preferences for films like this one are not the problem. However, when violent content becomes a common phenomenon up to the occurrence of an aggressive media environment, the probability that children develop a new frame-of-reference, and that problematic predispositions are channelled into destructive attitudes and behaviour increases immensely.

What are possible solutions? Probably more important than the media are the social and economic conditions in which children grow up. However, the media also are active contributors to cultures, beliefs, and orientations. Centralized control and censorship are not efficient and do not meet the criteria for democratic societies. Three major strategies should therefore be considered:

- Public debate and 'common ground' talks between politicians, producers, and teachers
- The development of professional codes-of-conduct and self-discipline for producers
- Innovative forms of media education to create competent and critical media users.

With communication systems like the Internet, the media are even more omnipresent and universal. As a consequence, the new digital environment demands at least as much attention and ethical/educational considerations as mass-media, culture and education in the traditional world. The debate should not center around how to get children and adolescents to avoid the media but how to use the media for entertaining and constructive goals.

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Biographical note

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He is President of the Dutch Society for Communication Sciences, a member of the Media Commission for the Presidents of Germany ('Weizsacker-Commission'), a Member of the 'Broadcasting Commission' for the Dutch Government, and a Crown-appointed member of the Dutch Government's Commission 'Information Society'. Also he is a Crown-appointed member of the 'Council for Culture' for the Dutch Government responsible for the media portfolio. He is a member of the Board of Governors of Utrecht College of Arts, a member of the German UNESCO Commission, and UN-Representative of the 'International Society for Research on Aggression'

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