Introduction to the Roles of Media and Interactive Technologies in Development

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On a daily basis, we are users of media and interactive technologies. It is almost impossible to imagine life without print media, TV, video, or computers—and the development and usage of new devices undergoes rapid changes. Much early research on media use effects focused on potential risks to psychosocial adjustment. In this Special Section of the Newsletter, we were interested in the range of current international research on media and interactive technologies, including both positive aspects and potential harm associated with media use. Given people's tremendous investment of time, energy, and emotion in the various domains of media, we hoped to highlight how such contexts might be integrated into developmental research. Articles in this special section focus on questions such as the following: Can media use facilitate positive developmental outcomes? Can effective media consumption be taught? How do modern interactive media and presented media content relate to human development? The interactive nature of media use offers an excellent opportunity to consider how individuals both shape, and are shaped by, their contexts. Further, the normative nature of involvement with media and interactive technology, particularly in developed countries, suggests they have become key domains for studying discretionary time use and daily (or at least fairly routine) developmental experiences.

We brought together fascinating new studies in the area of media conducted by scientists from Germany, China, and the US. These studies focus on the investigation of both positive and negative links of media use to learning, socializing, and behavior in infants, children and adolescents. An expert in the field of the role of media in development, Kevin Durkin, University of Strathclyde, Scotland, provided an integrative commentary on the four very diverse feature articles. In our Lab Report Section, we introduce the InGaMe Lab from Sweden where serious games, that involve the (adult) user and contribute to achievement (e.g., training of fire workers for rescue services), are developed and evaluated. Another report focuses on the role of thin beauty ideals presented via media on adolescents' body perceptions and dissatisfaction among adolescents in India.

This Special Section and the Lab Reports cover fresh and interesting research in the area of media from infancy to adulthood across various cultures by applying different research methods. They illustrate both the potential risks and rich opportunities provided by media use. We meet typical adolescents living online and organizing their social worlds, and also consider some risks emerging from consumption of violent video games, or continuous exposure to thin body ideals. We hope that you will enjoy the papers as much as we did and we are grateful to all authors for their contributions.

Living Online: Implications for Development and Developmental Methodology

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Adolescents and emerging adults are now living much of their social life online through social networking sites,

especially MySpace and Facebook. Therefore, as developmental researchers, we need to follow them to these new settings and study what is going on. At the same time, we should recognize that online settings offer new methodological opportunities. The relatively public nature of communication interfaces such as chatrooms, bulletin boards, blogs, and, more recently, social networking sites provides developmentalists with tools for observing the thoughts and social interactions of adolescents and emerging adults in a way never before possible. For example, very little research in developmental psychology on adolescent peer relations is based on actual observation of peers relating to each other in a spontaneous, natural manner. Similarly, very little research on the development of intimate relations in adolescence and emerging adulthood is based on observation of the *in situ* development of these relationships. And with good reason: these are phenomena that are quite inaccessible to researchers; yet they are central to this stage of development. But one of the hallmarks of life online is that it is quite public; therefore such phenomena become accessible to researchers in a way heretofore not possible.

For the last seven years, the Children's Digital Media Center, UCLA/CSULA has been exploring what life is like online and the developmental implications. We began with teen chatrooms (Greenfield & Subrahmanyam, 2003; Subrahmanyam, Greenfield, & Tynes, 2004; Tynes, Reynolds, & Greenfield, 2004; Subrahmanyam, Smahel, & Greenfield, 2006; Smahel & Subrahmanyam, 2007), instant messaging (Gross, 2004), personal websites (Suzuki & Beale, 2006), and bulletin boards (Suzuki & Calzo, 2004), moving on to blogs (Subrhahmanyam et al., in press) and, most recently, social networking sites (Manago, Graham, Greenfield, & Salimkhan, in press; Subrahmanyam, Reich, Waechter, & Espinoza, in press). Our major focus thus far has been to see how classic developmental issues of adolescence and emerging adulthood—identity, peer relations, and romantic partnering—play out online. In what ways is the offline world replicated online? In what ways is it transformed? And what are the developmental implications of both continuity and difference? A secondary focus has been to explore the representational tools used to communicate online—the verbal language of chat (Greenfield & Subrhamanyam, 2003)—and, more recently, the visual imagery used in the multimedia environment of social networking (Salimkhan, Manago, & Greenfield, in preparation). In this essay, I focus on this newest type of Internet interface, the one that is probably most transformational for human development: social networking sites, notably MySpace and Facebook.

What is a Social Networking Site?

Subrahmanyam, Reich, Waechter, & Espinoza (in press) summarize these sites' technical and demographic characteristics as follows:

> Social networking sites are the latest online communication tool that allows users to create a public or semi-public profile, create and view their own as well as other users' online social networks (Boyd & Ellison, 2007), and interact with people in their networks. Sites such as MySpace and Facebook have over 100 million users between them, many of whom are adolescents and emerging adults.

It is also a characteristic of social networking sites that they combine the features of many of the earlier Internet communication modalities in a multimedia format, which was not technically possible earlier in time. Thus, the MySpace *Comment Wall* and the Facebook *Wall* are similar to an electronic bulletin board, with the additions that it automatically includes an icon representing the sender and that a "comment" can be picture or video as well as words. There is a blog that is a constituent part of both MySpace and Facebook (called *Blog* on MySpace and *Notes* on Facebook). There is also a self-presentation part of MySpace (called *About Me*) and Facebook (in questionnaire format) that includes likes and dislikes, favorite activities, etc.; this is somewhat similar to online dating sites. MySpace and Facebook profiles also contain a *Photo Album*, which is an expanded version of another feature of online dating sites. Through MySpace *Friend Updates* and Facebook *Minifeed*, one is notified by e-mail whenever anyone on the user's "friend" list communicates with the recipient. In this way, e-mail is also integrated into communication via social networking sites. Social networking sites thus integrate all prior communication tools and add one powerful new feature: the social network. I will focus on the social network after considering some methodological issues.

Methodological Issues

Our research has taken advantage of the public quality of Internet communication to probe the inner and outer worlds of adolescents and emerging adults. Methodologically, we have utilized discourse analysis to take advantage of the public nature of chat rooms, bulletin boards, blogs, and personal websites to analyze actual conversations and postings of participants. Through teen chat, we have been able to observe up close and personal what adolescents choose to talk about with each other; through bulletin boards and personal websites we have been able to view and analyze the nature of their personal concerns.

At the same time, we have recognized that these windows on adolescent life are more suited to understanding the general cultural environment that young people are creating online than to understanding individuals and their development. One problem with anonymous chat rooms and bulletin boards is lack of knowledge as to important background factors for development, such as age and sociodemographic variables. In addition, discourse analysis of online material is not suited to investigating more private online communication media, such as Instant Messaging, which, at one point, was the medium of choice for adolescents (Gross, 2004).

Therefore, we have developed complementary methods in which background information can be ascertained for each individual participant and where private forms of online communication can be investigated. These have included surveys (Gross, 2004; Subrahmanyam, Reich, Waechter, & Espinoza, in press), focus groups (Manago, Graham, Greenfield, & Salimkhan, in press), and, most recently, videotaped tours through college students' MySpace profiles (Salimkhan, Manago, & Greenfield, in preparation).

One interesting aspect of Subrahmanyam et al.'s methodology was that they utilized both a paper-and-pencil questionnaire in the laboratory, and a subsequent online survey in which participants were asked to complete while viewing their social networking profile. This pairing of an online survey with participants' access to their MySpace or Facebook profile enabled participants to be more accurate in answering questions by being able to check their profile instead of relying entirely on memory for things like number of "friends."

The research program as a whole began with qualitative analysis in order to explore the nature of these new environments—something like virtual ethnography (Greenfield & Subrahmanyam, 2003), or focus groups (Manago, Graham, Greenfield, & Salimkhan, in press). Qualitative analysis of discourse enabled us to understand the environments young people were creating online and to identify the important phenomena therein. Once qualitative analysis had taught us *what* to count, we could move to mixed methods and purely quantitative analysis.

Unlike chatrooms or bulletin boards, social networking profiles are intrinsically tied to individuals. Our method of videotaped tours by an individual through his or her profile yields the best of both worlds—a window into online peer culture and association of a given online profile with the specific individual who created it, an individual whose characteristics, such as age and student status, are also known to the researchers.

Online Social Networking and the Development of Social Relationships: Findings and Further Questions

Undoubtedly the most important feature of electronic social networking is the list of "friends" that each user has. Each "friend" is in fact a live link to another user's profile on the social networking site. The "friends" list is actually a list of online profiles viewable by a particular user. And once linked to a "friend's" profile, a user has access to the "friends" of that "friend," and on and on infinitum. The word "friend" is put in quotes because the meaning of the friends' list on a user's electronic profile is much broader than the usual meaning of the word "friend." Thus, Subrahmanyam, Reich, Waechter, & Espinoza (in press) found that, on average, a college student in their survey had 137 "friends" listed on his/her profile! Focusing on the top ten people their participants interacted with offline and through online social networking sites, the researchers found that a mean of 49% of best offline friends were also on the list of top-ten online friends. On average, this would mean that about five of your top MySpace or Facebook friends are among your top-ten offline friends.

However, what about the other 132 or so "friends"? On average, participants interacted frequently with another 35 or so "friends." However, they had never met between 27 and 36 of their online "friends" (depending on the question asked). This is expanding the notion of "friend" into totally new terrain. This pattern of results bespeaks a pattern in which there exist face-to-face friends, friends who are both electronic and face-to-face, and friends who are electronic only. "Friends" as a whole seem to consist of layers of decreasing intimacy.

But the situation is even more complex than this, as Manago, Graham, Greenfield, & Salimkhan (in press) point out:

> The ease of communication on MySpace allows college students to remain connected to a large number of others, such as people from high school, acquaintances met at a party, "friends" of "friends," or music bands. This large network of "friends" creates what one participant described as a "second circle of friends"—a group of people with whom users would never keep in touch, or in some cases even meet, without MySpace as a tool.

Human beings evolved to live in small bands or village settings where most relationships were face-to-face, kin-based, and lifelong. Our emotions also evolved in these same contexts, including the emotions underlying attachment. Where so much of the weight of a relationship is carried by electronically mediated communication, is there a lesser attachment, leading, among other things, to shorter longevity of relationships? One piece of evidence for an affirmative response is the fact that 64% of social networking site users in the Subrahmanyam, Reich, Waechter, & Espinoza (in press) study reported that they had deleted a "friend" from their site.

Are adolescents and emerging adults expanding the quantity of relationships, while maintaining quality at the central core of the friendship circle? Or are attachments even at the central core becoming weaker? Or, on the other hand, given our mobile society, is MySpace helping relationships, such as with high school friends, to endure beyond their usual term limits, thus moving us back toward a much older world in which relationships were forever? The ease of electronic "deletion" is certainly a counterweight to this idea and indicates that both trends are occurring. All of these are difficult questions to research, but extremely important ones for developmental psychology and for our culture as a whole.

In addition, commerce has entered the friendship network. By making bands part of their online profiles and friendship networks, teens and emerging adults are also providing advertising for the bands. When a band is incorporated into a user's profile, the band becomes part of the user's identity. The line between the personal and the commercial starts to become eradicated. Because of the very large network of "friends" and "friends of friends," a personal preference becomes an advertisement broadcast to hundreds of others. Will this situation intensify socialization of young people as consumers? I cannot see how it could be otherwise, but we need research to find out for sure. Such an effect may be good for the economy, but it may also move young people away from humanistic and spiritual values and towards materialistic ones.

Manago, Graham, Greenfield, and Salimkhan (in press) sum up the situation as follows:

> With this large sphere of friendship networks, a new kind of "audience" is created for one's self-presentation on the profile. Rather than friendship circles representing a small clique of people who interact face-to-face in meaningful ways and share common experiences, the friendship network is now a larger and more abstract mass of people. It is more abstract because members can be commercial entities like

bands or "friends of friends" with either an exclusively virtual link or a fleeting offline link, rather than a consistent real-world link. The fact that many MySpace "friends" are distant acquaintances makes the group more like an audience than a traditional group of face-to-face friends. Thus, MySpace users are not necessarily presenting themselves through one-on-one interactions, but rather displaying the self as if on a stage to a mass audience observing a performance.

Even romantic relationships are often expressed in a public way for this same mass audience (Manago, Graham, Greenfield, & Salimkhan, in press). Here is an example from one of the college student focus groups:

Everybody looks at our MySpaces and like . . . says you guys are so close, I wish I could be like you guys . . . it just, maybe doing that shows other people how close we are. (Manago, Graham, Greenfield, & Salimkhan, in press)

This raises an important developmental question: What is the effect on intimacy and longevity of this kind of "public" romance? This is another fertile area for future developmental research.

Self-Presentation and Identity on MySpace

A large part of MySpace is taken up with self-presentation. On MySpace, self-presentation encompasses three facets of identity development: Personal identity, social identity, and gender identity (Manago, Graham, Greenfield, & Salimkhan, in press). Even more notable, on MySpace, the notion of advertising and marketing has extended from selling commercial items to selling the self. One male member of a college focus group said:

I feel like people . . . try to show themselves more than what they really are, kind of like advertise themselves and market themselves so like people will think, "oh this guy's a G" [short for "gangster" and signifying the ultimate man with money, power and fame]. (Manago, Graham, Greenfield, & Salimkhan, in press)

Another aspect of MySpace and identity development is that it provides opportunities for constructing and presenting not only the actual self, but also the aspirational self and the ideal self, thus becoming a tool in identity construction. Concerning the ideal self, one focus-group participant reported knowing someone who Photoshopped his acne away before putting his picture up on his MySpace profile. Both the ideal and the aspirational selves are highlighted in the following comment:

I could say for certain that there is no one out there with a profile that one hundred percent matches who they really are. If you look nice in a photo then you throw it up there. If you're doing something cool like skydiving, you throw that up there. At least if it's not things you're doing now it could be things that you aspire to do in the future, or if you're making yourself appear as a player or someone poetic, it may not be exactly who you are now but it could be someone who you aspire to be in the future.

Conclusions

What are the developmental implications, short-term and long-term, of living online? I hope that developmental researchers around the world are now convinced that the Internet in general and social networking in particular need to become a major component of developmental research. Just in terms of time budgets, the expansion of virtual life implies the contraction of the older forms of acting and interacting; and the important developmental populations of teens and emerging adults are leading the way. Equally important, this is a global trend that is affecting many countries of the world and bringing heretofore more isolated populations into a globalized world. As an example, in San Cristobal de las Casas, a major city in Chiapas, Mexico, the poorest state in Mexico, there were no telephones 40 years ago, and most people had never even visited Mexico city, then considered a foreign country. Now there seems to be an Internet "café" on every other block; and the "cafés" are constantly full of youth. In the 21st century, researchers need to investigate what it means for human development to live online.

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The logs of Eliza and other media stories: Behavioral and Developmental Effects of a School Based Media Education Program—Berlin Longitudinal Study Media

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The implementation of electronic media platforms by teachers and tutors is considered as state-of-the-art education. In the last decade, teachers at all levels of schooling had to take up the challenge of acquiring the needed knowledge, both to handle and to teach the appropriate use of multimedia computers as well as internet-based communication and learning tools. Beyond educational use of modern media technologies, leisure time media usage by children has developed even more rapidly. Modern childhood is undeniably a media childhood. Most children's everyday life activities are characterized, if not dominated, by the usage of several electronic media formats and contents. German nine-year-old schoolchildren, for example, spend an average of 1.5 hours daily watching television, and an average of 0.5 hours playing video and computer games. About 14 percent spend more than 3 hours daily total in both activities (see Feierabend & Klingler, 2003a; Mößle, Kleimann, & Rehbein, 2007). In 2002, about 25 percent of all German first graders already had their own TV in their bedroom (Feierabend & Klingler, 2003b). Internet communities like *facebook.com* or its German equivalent *schuelervz.net* empower young children to live an independent, digital life apart from "offliners" like parents, teachers and tutors. Compared with the enormous difficulties in establishing media use and teaching skills in a constantly overstrained teaching staff, children's abilities to integrate new media technologies into their everyday life seem to be nearly unlimited. Depending on one's point of view, the consequences of these trends can be described as either promising or depressing. Optimists refer to the complex and creative media use patterns many children were able to develop without any adult guidance in recent years. Pessimists rather point to the long-term consequences.

Alarming Media Effects

While parents and teachers slowly begin to explore the benefits and risks of the new media age, their children and students are right in the middle of it. The possible effects of children's often excessive media habits are still hotly debated in public forums as well as among researchers. Besides the debate regarding possible influences of media use on children's and adolescents' social and cognitive development, the relationship of violent media content and violent behavior has been intensely discussed for a long time. In the last years, elaborated studies and meta-analyses show rather clear results supporting the pessimists' point of view. Today "there is little doubt that viewing television violence has a causal effect on aggressive behavior" as Huston and Wright (1998, p. 1043) recapitulated in their chapter on the effects of media violence in the *Handbook of Child Psychology* after a thorough review of several experimental, longitudinal and meta-analytical studies. "Overall", they conclude, "the longitudinal studies support theories predicting that violence contributes to children's learned patterns of behavior or scripts in ways that can be manifested in behavior well beyond childhood" (Huston & Wright, 1998, p. 1031). Regarding computer and video games, Möller (2006) for the first time analyzed the relationship between violent video game content and aggression among primary school children in a longitudinal design. Her findings show a causal link between the playing of violent computer games and physical aggression, a result which is consistently reported in the literature (see Anderson & Bushman, 2001; Anderson & Dill, 2000; Anderson, Gentile, & Buckley, 2007; Bushman & Anderson, 2002; Bushman & Huesmann, 2006; Gentile, Lynch, Linder, & Walsh, 2004). Recent studies also point to a causal relation between media violence and a desensitization to real-life violence as well as a loss of empathy of heavy users of media violence (see Bartholow, Bushman, & Sestir, 2006; Funk, Baldacci, Pasold, & Baumgardner, 2004). Carnagey et al. summarize the current research as follows: "Children consume increasingly threatening and realistic violence, but the increases are gradual and always in a way that is fun. In short, the modern entertainment medial landscape could accurately be described as an effective systematic violence desensitization tool" (Carnagey, Anderson, & Bushman, 2007, p. 7).

Violence, desensitization, loss of empathy: these relatively well-explored effects can only serve as examples for an entire bouquet of possible negative effects associated with modern electronic media usage by children. So-called computer game addiction and poor academic performance (for a literature review see Mößle, Kleimann, & Rehbein, 2007), to name but two more examples from our current research on children's media usage, are both urgent media related topics. In addition, our research shows the disturbing result that parents seem to be too vastly overextended to successfully guide their children to use appropriate media content, for an appropriate purpose, for an appropriate time. In a study with 5,529 fourth grade primary school students conducted in Germany in 2005, 24 percent of all interviewed children reported a complete absence of any computer-related media education by their parents. Only 39 percent reported appropriate parental guidance. Unsurprisingly, we also found a remarkable effect of family status on parents' media education efforts: The lower the parents' educational level and household income, the lesser children's electronic media use was attended by their parents (see Möle, Kleimann, & Rehbein, 2007).

School-Based Media Education

Since a) electronic screen media are widely available in children's bedrooms, since b) several problematic media usage effects are considered by international research, and since c) parental guidance and monitoring of children's media usage tend to be unsatisfactory, increasing emphasis has to be placed on the role of schools in imparting media skills. To date, however, children's everyday media use is rarely touched upon in the classroom. Furthermore, German teachers' and school authorities' difficulties in not only promoting modern media as effective educational tools, but also choosing children's media usage as a central educational topic, essentially dash the hope set on the beneficial role of schools. Looking abroad, however, a couple of promising, empirically evaluated approaches can be observed, using school-based media literacy programs and media education programs for a whole set of different purposes. Teaching units on tobacco and alcohol abuse (see Gonzales, Glik, Davoudi, & Ang, 2004; Pinkleton, Weintraub Austin, Cohen, Miller, & Fitzgerald, 2007), on obesity or prevention of anorexia (see Austin, Field, Wiecha, Peterson, & Gortmaker, 2005; Gortmaker, 2008; Robinson, 1999) as well as on violence reduction (see Botvin, Griffin, & Nichols, 2006; Robinson, Wilde, Navracruz, Haydel, & Varady, 2001), all more or less primarily focus on children's and adolescents' media usage. Depending on the specific aim of the program and the age of the participants targeted, either reflection-based media literacy strategies or reduction-based media education programs have been implemented. Teaching units focused on alcohol and tobacco, for example, mainly aim to sensitize students to hidden or obvious advertising messages as well as to certain "cool" role stereotypes associated with tobacco or alcohol use as portrayed in the media. Some obesity prevention programs, on the other hand, mainly focus on the sheer reduction of media usage times, for the reason that extensive media use, regardless of the perceived content, is causally linked with a more sedentary and therefore unhealthy lifestyle. Beyond the particular theme of a program, a student's age is of exceptional importance, as exercises in reflecting certain media messages do not make any sense for first graders, for example. Researchers widely agree, however, that media education programs are only likely to succeed if two conditions apply: Firstly, children must be reached at an age where questionable behavior and attitude patterns have not yet become ingrained and, secondly, it seems that intensive work with parents is necessary in addition to the media education at school. It is therefore unsurprising that the effective media curriculum published by Stanford University, which mainly focused on a reduction approach, is targeted at nine-year-olds and emphasizes work with parents (Robinson, 1999; Robinson, Wilde, Navracruz, Haydel, & Varady, 2001). Crucial effects reported after a school-based media usage intervention program (18 lessons within about 2 months) were a reduction of average TV and computer game times, a reduction of school violence, an improvement in class climate and a decrease in body mass index.

The media education program—implementation and measure

Taking the promising effects of the Stanford study, we worked with primary school teachers in a pilot project, part of the *Berlin Longitudinal Study Media*, to develop and systematically evaluate school-based media education lessons for the third and fourth grades. Our main goal, however, was not to impact children's body mass index or class climate, but to enable children (and their parents) to establish an age appropriate, moderate media use without undesirable side effects.

The *Berlin Longitudinal Study Media* is a five-year longitudinal control group study (see Figure 1) with 1,059 elementary school children (third to sixth grades; baseline, $n = 113$; treatment, $n = 492$; control, $n = 454$).

492 children in 20 primary school classes across Berlin took part in the pilot lessons. The two pilot teaching units were based on two reading booklets in which schoolchildren learned about various aspects of media use and media effects in a set of stories and tasks that build on each other. Within the third-grade unit (approx. 12 lessons) entitled "Media Pilot Training Program", conducted in late spring 2006, students in all participating classes read a story that deals with several third grade students and their experiences with TV and computer games. After a controversy between the students and their teacher about inappropriate media use on a school trip, the class and the teacher enter a media usage contract. Core instruments of this first unit were a media and leisure time log, a TV-planning tool and the media usage contract. In the fourth grade unit (approx. 12 lessons) "The Logs of Eliza", which followed one year later in 2007, the story of Bela, a thirteen-year-old boy, is told. School problems and the critical illness of his

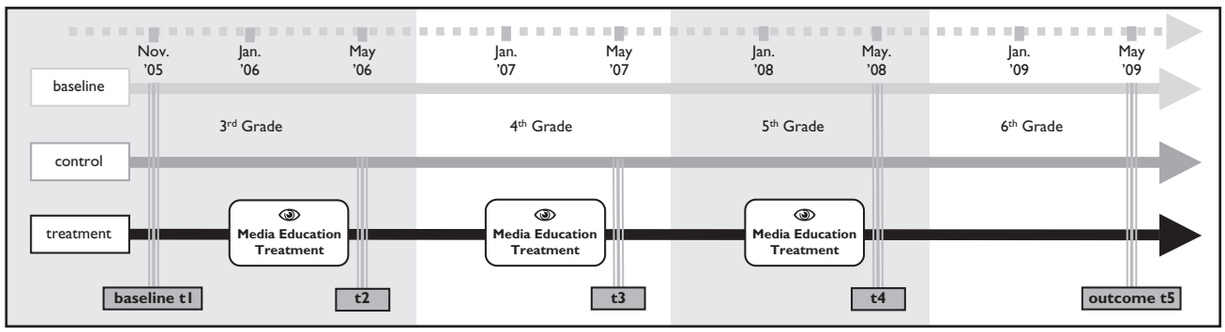

Figure 1. Design.

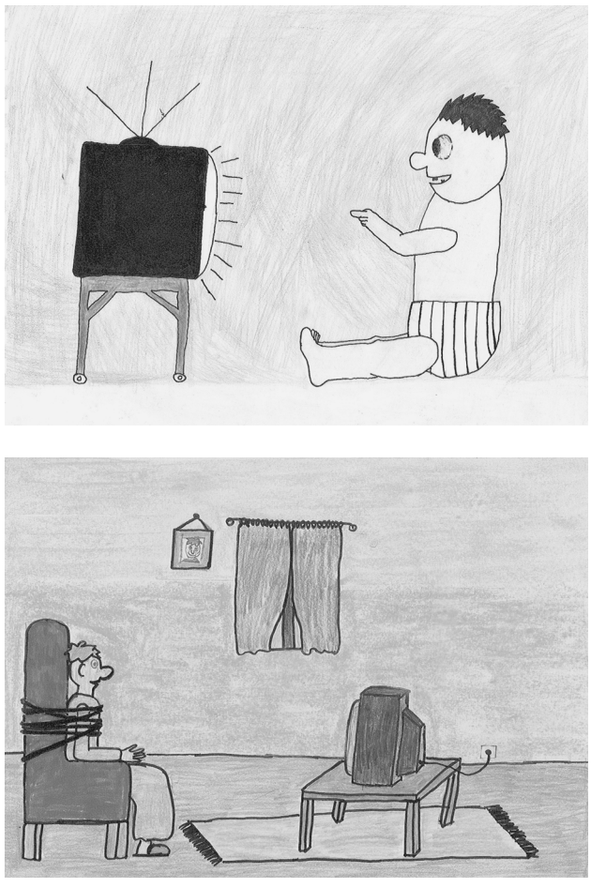

Figure 2. An essential part of the media education lessons was the creative reflection of children's media usage and its possible effects.

mother impel him to escape from everyday life into the virtual world of an online role-play computer game. After a chat with Eliza, an old-fashioned internet *chatbot* with some strange new abilities, Eliza mails Bela a couple of logs: journal files of Eliza's former chats with kids like him. Every log file describes another media-related problem such as media violence use, social isolation or media addiction. Reading these logs, Bela realizes that Eliza is not an ordinary computer *chatbot*, but a kind of media usage advisor. Unfortunately, it turns out that the chat computer's advice to solve its chat partner's problems is not very helpful, but may be rather extremely harmful. Finally, he realizes, it is up to him to develop a reasonable approach to media usage.

Both teaching units were supplemented by several exercises, role-plays, peer interviews and behavioral trainings. Within the units, teachers were advised to give clear instructions to reduce electronic media usage to a reasonable time slot not exceeding 60 minutes per school day and to discuss possible harmful effects of an age-inappropriate media usage. On the other side, we instructed the teachers to organize their lessons as a process of two-way-learning: Teachers were explicitly encouraged to give students the chance to talk about their favorite media devices and contents, to illustrate the fascinating aspects of electronic media usage and to explain the positive facets of electronic media. It is our firm conviction that only after teachers really understand their students' media world can they be serious pilots and broadly accepted advisors in this world. Furthermore, both teaching units were accompanied by trilingual leaflets for parents, parent-teacher-conferences and letters to parents. As the cooperation of parents is an essential part of a teaching unit on leisure time media behavior, we advised the teachers to arrange parent-teacher-conferences where the "media topic" was linked with other important (e.g. monetary) decisions, to get a real chance to get through to almost all parents and not only the committed ones.

On three occasions—before the first lesson in autumn 2005, after the first lesson in spring 2006, and after the second lesson in spring 2007—a survey was conducted with the children in the classes receiving the lessons and with a further 454 schoolchildren from 20 control classes. On all measurement occasions, a paper-pencil interview was completed within the classroom setting concerning media availability and exposure, leisure time and social behavior, perceived parental education and guidance (general/media), as well as socio-demographic parameters. Standardized psychological tests served to assess students' IQ (CFT 20), academic self-image, classroom climate and social integration (FEESS 3–4). Additionally, all students' body weight and height were taken. The children's parents were questioned at t1, t3 and t4 regarding socio-demographic parameters, educational achievement, media equipment and exposure (self/child) as well as their children's leisure time behavior. A teacher questionnaire was used to evaluate class characteristics, school performance and work habits at all measurement occasions.

Findings

Due to our primary research focus on media usage effects on academic achievement of primary school students, data on students' violent behavior was not collected until t3. Therefore, at this point we can neither present longitudinal data on the correlation between media violence and violent behavior, nor can we interpret group differences between control and treatment group as causal effects of the intervention. Nevertheless, we considered it appropriate to calculate a structural equation model for t3 to test the hypothesis of an independent effect of media usage on violent behavior. Our model (see Figure 3) shows significant correlations between gender (male), personality variables (lower empathy and higher impulsiveness), a high degree of daily media exposure (content and time), and problematic social behavior (measured by school violence).

In this analysis, we especially focused on the role of empathy and its moderating influence on the relationship between media violence and violent behavior. On the one hand, as expected, we observed a direct, independent effect of violent media content use on violent behavior, although we could not verify, as our literature review would suggest, a significant direct effect of violent media content use on empathy. On the other hand, we could confirm a direct effect of temporal daily media exposure on empathy. From our point of view, this result can be interpreted as indicating a necessary change in our perspective on media

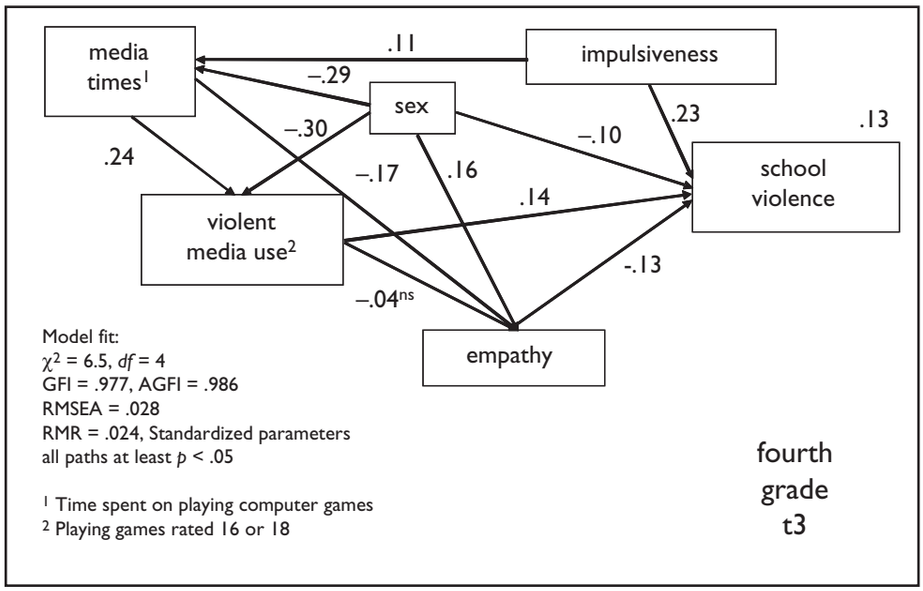

Figure 3. Structural equation analysis of school violence.

violence research. Sheer media exposure times are of importance for the development of violent behavior, an influence that should not be underestimated. Children who spend several hours a day in digital virtual worlds, interacting only with media characters or avatars of other users, seem to have a deficient development of empathy, independent of the consumed content. Our interpretation: Para-social relations to media characters and avatars cannot substitute the role of real-world social interactions in developing empathic abilities.

In this context, the results regarding our media teaching units were encouraging (included in the analyses were only those students who participated in all three measurement occasions; treatment: $n = 401$, control: $n = 363$): Firstly, after three measurement occasions, the percentage of primary school children with a television or a games console in their bedroom was significantly smaller in the intervention than in the control group (see Figure 4).

Although there were already minor differences between the groups at the time of the first survey (t1), the media education lessons succeeded in widening them. We also observed effects on media exposure (time and content) for children in the 20 intervention schools at the third measurement occasion (t3), compared to children in the control schools. Regarding school achievement, further measurements have to be obtained before we can assess true effects of our media education program. First analyses, however, show a higher percentage of children improving their marks in the intervention group (56 percent) than in the control group (48 percent). Besides students' media behavior, first analyses of t1 to t3 longitudinal data focused on parental media education and guidance. In our understanding, parental media education consists of an attendance-part and a regulation-part. Parental attendance implies an interest in children's media habits and an active engagement in helping children to reflect on those habits. The regulation-part consists of clear parental rules regarding tolerable media times and media content on the one hand, and monitoring of these rules on the other hand. In our questionnaire, we focused on parental media education regarding TV usage and video game playing. Figure 4 d) shows an intervention effect on parental media education relating to TV usage. Parents' educational engagement in the video game playing habits of their children increased in both groups, whereas we cannot detect an additional intervention effect. Even though control group parents and group parents show intensified efforts in video game related education (which is probably related to the intensive current debate on video game usage in Germany), the work with parents has to be intensified in the subsequent years of our program.

What is to be Done?

Fortunately, our program is far from being finished yet. In early summer 2008, students in the treatment group took part in a third step of our media education program, and a fourth measurement (5th grade) was instituted in all three study groups (data regarding this third year of our program are currently being analyzed). An additional media education unit and measurement occasion is scheduled for the end of sixth grade in summer 2009 and we will probably be able to follow students of all groups, treatment, both control and baseline, up to the ninth grade. Thus, long-term effects of our primary school media education program can be tracked into adolescence. So much for the good news. The bad news is that due to crammed curricula, it is hard to convince treatment group teachers to take part in a last, fourth teaching unit. As long as school-based media education is not made compulsory in German curricula and is focused only on new electronic learning and teaching tools, this very important task will tend to be sidelined for sure. It is necessary, on this account, to illustrate the chances and advantages of media education programs based on viable, well-evaluated examples, which can easily be integrated into current school curricula.

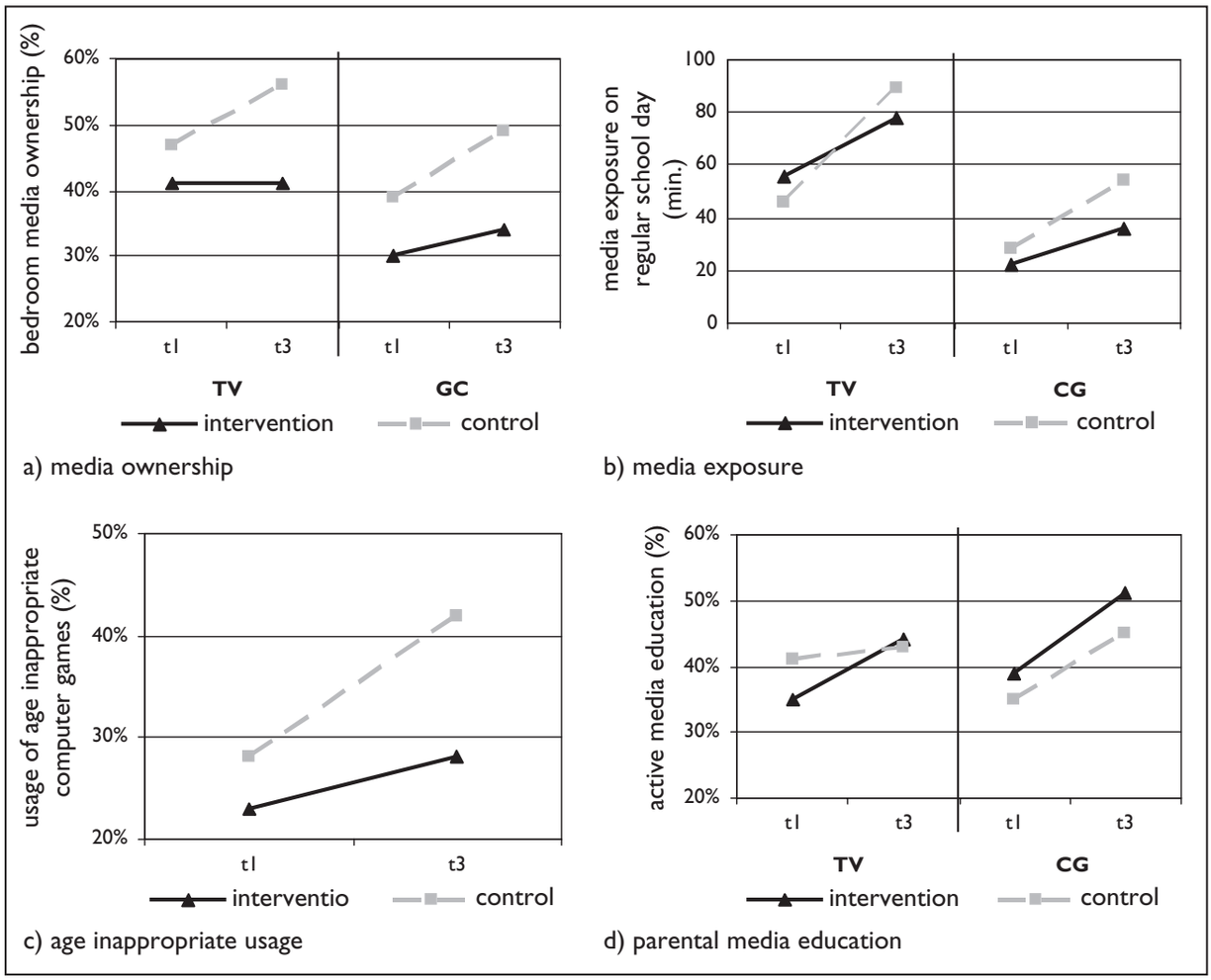

Figure 4. ***A)*** *Bedroom media equipment*[1] *(TV,* ***G****ames* ***C****onsole in %) by group and measurement occasion.* ***B)*** *Media exposure on an average school day*[2] *(TV,* ***C****omputer* ***G****ames in minutes) by group and measurement occasion.* ***C)*** *Usage of age-inappropriate computer games (rated age 12, 16 or 18)*[3] *by group and measurement occasion.* ***D)*** *Active parental media education*[4] *(TV,* ***C****omputer* ***G****ames) by group and measurement occasion.*

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[1] Multivariate (TV/GC/PC) Analysis: Media Equipment (Repeated) × Group, $F(3/605) = 4.61$, $p < .01$, $\eta^2 = .02$; Group $p < .05$, $\eta^2 = .02$; Media Equipment, $p < .001$, $\eta^2 = .04$.

[2] Multivariate (TV/CG) Analysis: Media Exposure (Repeated) × Group, $F(2/706) = 4.26$, $p < .05$, $\eta^2 = .01$; Group $p < .01$, $\eta^2 = .02$; Media Exposure, $p < .001$, $\eta^2 = .11$.

[3] Univariate Analysis: Inappropriate Usage (Repeated) × Group, $F(1/371) = 1.87$, $p <= .17$; Group $p < .01$, $\eta^2 = .02$; Inappropriate Usage, $p < .001$, $\eta^2 = .04$.

[4] Multivariate (TV/CG) Analysis: Parental Media Education(Repeated) × Group, $F(2/540) = 5.86$, $p < .01$, $\eta^2 = .02$; Group $p = .20$; Parental Media Education, $p < .001$, $\eta^2 = .04$. Univariate (TV): Parental Media Education(Repeated) × Group, $F(1/541) = 5.39$, $p < .05$, $\eta^2 = .01$. Univariate (CG): Parental Media Education(Repeated) × Group, $F(1/541) = .989$, $p <= .282$.

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Adolescents' Video Game Playing and Aggression

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Now that computers are widespread, more and more people are playing games on them for daily recreation. Game designers have become a highly-paid elite due to the demand in this market, and the number of game *players* has been increasing rapidly. Moreover, gamers are no longer satisfied with the initial mild games played just for fun, and have begun to actively seek game partners online. Violence is playing a larger part in games. According to the "2007 annual report of online gaming in China", 19% of students were keen on online-games; nearly 60% of players were 19–30 years old; 31% of players preferred RPG (Role Play Games); and 24% preferred ACT and FPS (Action Game & First Personal Shooting Game). Young people 19 years of age and below have been investigated less; to explore the nature of adolescents' game playing and its consequences, a research group in the Center for Child Development and Family Studies at the Shanghai Normal University conducted a research project focusing on the video game playing of adolescents. The participants were students in grades 6, 8, and 10 in middle schools in Shanghai, China. We collected comprehensive data on various violence levels of video game playing, game play time, level of game skill, behavior problems, personality traits, parenting styles, family earnings, etc. Our aim was to use multi-methods such as questionnaires and experiments to investigate the access of Chinese children and youth to violent video games, analyze possible causes of aggression, and test the relations between violent video game playing and aggression.

Why Do Adolescents Love to Play Video Games?

In our project, we were first interested in reasons for adolescents' involvement in video games. Our results suggested that middle- and high-school students like to play video games (with violence or not) for the following main reasons:

First, games are designed elaborately and beautifully. For example, some RPGs (Role Play Games) have an intricate plot and funny dialogue, and some have delicate CG (Character Graph) designing and dramatic audio effects, which can have a magnificent audio and visual impact.

Second, the system of levels in game design can provide players with an experience of success. Video games usually have a character level and a game level. Players can get access to higher levels after gaining enough points through their own efforts, and have a chance to experience success thereby.

Third, games can enhance players' judgment and other abilities and enable them to practice using strategies. Many games require players to make quick judgments, and some

Adolescent playing a video game.

games can help players acquire tactical skills, quick reaction time, and hand-eye coordination.

Fourth, games can be the platform for relief from negative moods. Games can not only make after-school life colorful, but can also reduce the negative emotions generated by frustration. Some shy children may be more comfortable communicating through games without having to engage in face-to-face contact and using their real names.

Finally, video games can become training in rule consciousness. Teenagers may associate various rules learned in game playing with laws in life and the disciplines at school. So game playing can enhance the development of rule sense.

However, video games, especially those using high violence, can be dangerous to children and teenagers. This possibility of danger has been substantiated in numerous empirical studies (e.g., Gentile et al., 2004; Griffiths, 1999) and by many real-life examples.

The Danger of Video Game Play

Compared with the original games (violent or non-violent), current video games have better simulative visual effects. Game participants can usually take on better roles, for nearly unlimited periods of time. In addition, with the fictitiousness and invisibility of the net, children and teenagers are likely to have stronger feelings and emotional experiences about video games than about traditional media. Experts of violent multiplayer games may be emboldened to commit actual crimes such as robbery because violent games have bolstered their courage and inculcated criminal tricks. Among the teenagers sent to work in a junior prison in Guangxi province in China, most had indulged in violent games. On April 20, 1999, two American teenagers, Eric Harris and Dylan Klebold, killed 13 people and injured 23 at Columbine High School in Colorado. The investigation revealed that they both enjoyed playing the bloody video game *Doom*. A college student, Ma Jiajue, in Yunnan province, China, killed four roommates in 2004. It was found after the incident that Ma was fond of violent games.

Researchers have conducted many studies about violent media or games affecting children's aggression. Comparing the violent effects of various media, Calvert & Tan (1994) indicated that players who took part in violent video games, rather than merely observing, tended to initiate aggressive behavior. In traditional media, people usually take a role as a passive observer. Video games give players more opportunities to practice attacking. Violent video game playing is positively related to aggressive behavior and delinquency. Academic achievement is typically negatively related to the amount of time spent playing video games. And exposure to a violent video game increases aggressive thoughts and behavior (Anderson & Dill, 2000). Many studies have shown that observing aggressive behavior in the media tends to increase aggressive responses (Mummendey & Otten, 2001).

Playing aggressive video games may have negative effects on players' emotional state, increasing their hostility and anxiety (Griffiths, 1999). Based on a meta-analytic review, Anderson (2001) found that exposure to violent video games is positively related to physiological arousal and aggressive cognition, personality and behavior. It appears that exposure to violent games for short and long period of time can result in heightened aggression in both girls and boys (Anderson & Murphy, 2003; Ostrov, Gentile & Crick, 2006).

Nowadays, adolescents' game playing has become a social problem because games have become more and more violent. The multiplayer game, which involves a wide range of teenage participants over a long timeframe, is in its golden age. Players can even exchange their experience during the short break between classes. Many parents and teachers thus feel worried about children who are addicted to the games.

Violent video game playing and adolescents' reactions to violent pictures

In China, many people have speculated that violent games may be associated with juvenile delinquency and negative emotional reactions. However, there has been little research in this area. In an experiment using a before-after testing design, we asked high school students to click the "mental program", including violent or non-violent pictures and kinds of questions displayed on the computer screen, and then make their responses according to a prescribed procedure. After two weeks, three groups of participants, with eight persons per group, were assembled to play video games at three levels of violence: high, medium and low. After game-playing for 10 minutes, they entered into the "mental program" which had been used in the before test. Participants in the control group entered directly into the "mental program" without 10 minutes of game playing.

In the group that played video games before viewing the "mental program" pictures, a significant difference in reaction time to violent pictures was demonstrated. Reaction time change (i.e. 'after reacting time' minus 'before reacting time') of the high-violence and medium-violence group was longer than that of the low-violence group and the control group. The results were largely similar for junior and senior high school students. The participants' reaction time to those violent pictures might increase after playing violent games because the games

reduce the participants' sensitivity to. In addition, participants' computer operating habits and mouse agility, the types of characters presented in the pictures, and other factors may lead to change in reaction time.

Video Game Playing Related to Behavior Problems and Family Environment

We recently conducted a study investigating the relationship between video game playing and adolescents' behaviors, and the effects of family factors. The results showed that the frequency and history of video game play were highly positively related to behavior problems. The time teenagers spent playing video games was also related to behavior problems. Those adolescents (about 3%) who played over 30 hours every week had considerably more behavior problems than others. The study revealed also that the more teenagers used violent elements in game play, the more behavior problems they had. The choice of shooting, strategy and role-taking (adventure), observational learning of aggressive behaviors and actual combat rehearsal in virtual games seems to reinforce teenagers' tendency to attack in reality. On a positive note, teenagers with behavior problems might prefer to seek pleasure from the virtual games and positive comments, which they did not get in reality.

The relations between game playing and behavior problems may be moderated by parenting attitudes and practices. Those teenagers who liked to play games with more violent elements and who also received low warmth from parents had the most behavior problems. We found that parental "over-intervention" was closely related to teenagers' history of video game playing. Adolescents who had played video games for both one to three years and for over three years were more likely than those who played for less than one year to report that their parents practiced "over-intervention", "rejection and denial" and "severe punishment". And the post hoc test showed that there were significant differences between the often-playing group and the other two groups (the never-playing and the sometimes-playing group). Parental "over-intervention" was also associated with a high frequency of adolescents' game playing. Perhaps parents' "over-intervention", rejection and punishment impel children to search for comfort in the virtual world of games and to become self-indulgent in playing.

Family income is significantly associated with teenagers' game-playing frequency. Among those with family income over 8000RMB each month, 65% were often-playing adolescents. In contrast, among those with family income of less than 1000RMB and 1000–2000RMB each month, only 22% and 16% were often-playing. This is understandable because those from poor families often cannot afford to buy games. The level of maternal education was correlated with teenagers' playing frequency. Among the mothers of the often-playing participants, 10% had completed elementary school, 23% junior high school, 34% senior high school, 36% undergraduate, and 50% postgraduate. Fathers' education was not related to teenagers' playing frequency. In China, maternal education levels are related to total family earnings more strongly than is the education level of fathers. Mothers with a higher education level often find jobs with higher salaries, and may be more likely to accept their children's playing video games.

Video Game Play and Personality Traits

We also studied how adolescents' personality traits might play a role in explaining game playing time, degree of violence, and skill levels in video games. The results are summarized as follows.

1) P scores (psychoticism) in EPQ were associated with time spent in game playing. P scores of often-playing participants were higher than those of never-playing and sometimes-playing subjects. Participants spending 10–20 hours per week playing games had higher P scores than those who never played, those who played less than 3 hours per week and those who played 3–10 hours per week. There were no significant differences between P scores of 10–20 hours and 20–30 hours or over 30 hours.

2) Regression analysis indicated that P scores strongly predicted violence scores and behavior problems. N scores (neuroticism) and L scores (lying) predicted violence to a lesser extent.

3) We examined whether violent elements that adolescents used in play were related to the location of play and the player's skill level. The adolescents who played video games in Net Bar tended to be introverted. Game players are usually classified into various skill levels, from high to low: Bone-ash, big-shrimp (or knight-errant), general level and vegetable bird (i.e. beginner) respectively. Those with higher P scores had higher skill levels. Compared to players at other levels, Bone-ash level players were more lonely and friendless. Both Bone-ash and big-shrimp level players had a higher violent game index than the other two groups of players, but notable differences were evident between Bone-ash and big-shrimp, general level and vegetable bird.

Advanced players (i.e. Bone-ash, big-shrimp) of violent games are likely to indulge in shooting or killing in the game world day and night; they are good at using violent elements and become more cruel and coldhearted than others. In our sample, about 21% were Bone-ash and big-shrimp level players, which is a considerable proportion that deserves attention from educators and developers of video games.

In conclusion, video game playing can bring adolescents considerable happiness, teach them tactics for coping with difficulties, and set up a platform for relief of negative mood. However, if addicted to video game playing, adolescents can also be at risk. Adolescents who liked to play games with more violent elements got low warmth from parents and had more behavior problems. Advanced game players used more violent elements and became more cruel and coldhearted than game beginners. It is a challenging task for parents and professionals to help children to use the computer in constructive ways, and reduce the negative effects of game playing on children's socio-emotional, cognitive, and physical development.

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The Impact of Video on Infants and Toddlers: Can Video be a Teaching Tool?

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A Video Upbringing

The last few decades have seen a booming market of baby videos/DVDs aimed at 1 to 36 months (e.g., *Baby Einstein®*, *Brainy Baby®*, and *Sesame Beginnings®*), the launching of the entire television networks specifically targeting children as young as 12 months (i.e., *BabyFirst TV*), and a multimillion-dollar industry selling computer games for 9-month-old children (e.g., *Jumpstart Baby, Baby wow*). By all accounts, these products have enjoyed enormous levels of popularity. Yet, some believe that very young children should not be exposed to screen media of any kind. The American Academy of Pediatrics (AAP) currently recommends that children under the age of 2 avoid exposure to screen media altogether, and that the viewing time of children over 2 be limited to no more than two hours a day (American Academy of Pediatrics, 2001).

However, it is clear that few follow this recommendation. Children ages 0–6 spend an average of 1 hour and 43 minutes viewing television, videos or DVDs, and fully one-third of them have a television in their bedroom (Kaiser Family Foundation, 2006). The parents of only 30% of children under the age of 2 actually follow the AAP's screen time guidelines (Vandewater, Rideout, Wartella, Huang, Lee & Shim, 2007).

It is often assumed that the AAP recommendation is based on empirical evidence indicating that there are in fact, harmful effects of media for children under 2. In fact, we actually know very little about the impact of video on very young children, as there is an extreme dearth of research in this area.

Current Research on the Impact of Media on Very Young Children

Experiments on learning from video have repeatedly found that infants and toddlers learn better from real-life experience than from video. This "video-deficit" disappears by about age three, when learning from video becomes robust (Anderson & Pempek, 2005; Hayne, Herbert & Simcock, 2003). Support for the video deficit hypothesis comes from several lines of research such as studies regarding deferred imitation (Barr & Hayne, 1999), learning from emotional cues (Mumme & Fernald, 2003), search behaviors (Schmitt & Anderson, 2002), and vocabulary learning (Kcrmar, Grela & Lin, 2007; Pruden, Hirsh-Pasek, Maguire & Meyer, 2003). There are several studies suggesting that this video deficit can be overcome for 1- to 2-year-olds when the demonstration of the target actions is repeated (Barr, Muentener, Garcia, Fujimoto & Chavez, 2007) and when toddlers have interactive experiences with television (Troseth, Saylor & Archer, 2006).

Some report that media use has harmful effects on young children. Schmidt, Pempek, Kirkorian, Lund and Anderson (2008) report that background television of adult programming interferes with infants' and toddlers' ability to engage in focused attention during play. The authors note that background television comprises adult programming that is largely incomprehensible to young children, and that these findings may not apply to programs specifically designed for infants and toddlers.

Recently, Zimmerman, Christakis and Meltzoff (2007) found a negative relationship between language development and the viewing of "infant" video programs. They found that each hour of viewing videos/DVDS designed for infants and toddlers was associated with a 16.99 decrease in language development (percentile rank scores) among 8–16 month olds. They found no relationship between language development scores and infant video/DVD viewing among older children (ages 17–24 months). Though these data are intriguing, it is important to note that they are correlational. Thus, it is impossible to know from this study whether the viewing of infant videos causes delayed language development, or whether children with delayed language development watch more infant videos. Whatever the answer, it is clear that further research

in this area is urgently needed, and that there is a particular need for experimental designs.

There is at least some reason to believe that these videos might, in fact, have a positive impact on young children. Evidence from studies of older children strongly supports the notion that high-quality educational programming has positive impacts on children's academic skills, academic engagement and attitudes toward learning (Anderson, Huston, Schmitt, Linebarger & Wright, 2001; Schmidt & Vandewater, 2008).

A handful of studies examining the impact of media on toddler learning and development have begun to emerge (Barr & Hayne, 1999; Barr et al., 2007; Barr, Muentener, & Garcia, 2007; Linebarger & Walker, 2005; Poulin-Dubois & Forbes, 2002). This nascent body of research suggests that very young children can learn from screen media, and that much like preschool children, program content guides the kinds of things infants learn (Barr & Hayne, 1999; Linebarger & Walker, 2005; Poulin-Dubois & Forbes, 2002). Though these studies are promising, to date no study has been conducted examining the impact of infant videos on basic identification skills.

The purpose of this study is to evaluate whether toddlers can learn and identify a novel shape—the crescent—through exposure to a video designed to teach this shape. We tested the following hypotheses:

H1: Children in the experimental condition will be significantly more likely to be able to identify the crescent shape than those in the control condition.

H2: Children in the experimental condition will be no more likely to be able to identify the four other test shapes (triangle, circle, square, rectangle) than children in the control condition.

Study Participants

A community sample of children were recruited from Austin, Texas and surrounding areas through local on- and off-campus newspaper advertisements and flyers placed in libraries and child care centers. Children between the ages of 12 and 32 months with no major developmental delay were deemed eligible to participate. Seventy-two children were recruited, 17 withdrew during the course of the study, and 58 children completed the protocol. Children ranged in age from 13 months to 33 months, with a mean of 21.95 months (SD = 5.21), and were approximately equal with respect to gender. Fifty-eight percent of the sample was White, 13 percent Black, 13 percent Latino, 13 percent Asian, and 4 percent other ethnicities.

Participants were randomly assigned to one of two conditions: experimental (n = 32) and control (n = 26). A randomization check confirmed that there were no significant differences among children in the control or experimental group on any measure of child or family background characteristics reported in Table 1. Children who were in the experimental group viewed a 10-minute clip based on a popular infant video but modified for the study featuring lessons regarding the shapes of the circle, square, rectangle, triangle and crescent. The DVD paired visual representation of each shape with voice-overs identifying the shapes by name. Children in the control group viewed the same 10-minute video, with the references to and representations of the crescent removed.

Children participating in the intervention study.

This study assessed whether children could learn the crescent shape from the video. We chose the crescent because it is a novel shape to most US children, and parents are less likely to teach it than they are the other shapes tested, which are commonly taught to children starting at a very young age. Moreover, even if parents do teach their child the crescent shape, they are more likely to identify the shape for their child as a moon. For a child in the study to

Viewing lessons focusing on shapes.

be counted as being able to identify the crescent shape, they had to respond to the word crescent by correctly pointing to the shape.

Children viewed the video at home. Parents were asked to show their child the video a minimum of 5 times per week for a three week period. Once the viewing period was over, children were brought to the lab for testing. Children were given a roughly five-minute warm-up period to help them feel comfortable in the room and with the experimenter. Children were considered to be comfortable with the experimenter after they made eye contact and handed the experimenter an asked-for item. Children then watched a three-minute refresher video clip from the research video specific to group assignment. Children were asked to identify shapes for the experimenter by pointing them out in a picture book which contained pictures of the shapes as they appeared in the videos. Children were asked to identify five shapes: crescent, triangle, circle, rectangle and square. The experimenter said, "Can you show me the [shape]?" at the beginning of each trial. To prevent order effects, the order in which children were asked to identify the shapes was varied. Each shape was presented with another shape, such that children had a 50% chance of choosing the right or the wrong shape. Children were presented with one page at a time for 60 seconds or until they moved away or cried (defined as did not respond).

Results and Discussion

The dependent variable was the first point to one of the two pictures. Coders agreed 100% of the time on which picture a child pointed to or whether he/she did not respond. Table 1 presents descriptive information for the sample, including means and standard deviations or proportions on all variables of interest.

Overall, many more children were able to identify each of the five shapes correctly than were unable. It is worth noting that although there were 15 children under the age of 18 months, far fewer of this group actually responded to the protocol. Children of this age were much more likely to not respond to the interviewer at all, even after comfort was established. Thus, too few children under the age of 18 months completed the protocol to allow us to examine them separately.

It is difficult to know the implications of this. On the one hand, it could mean that these children are too young to learn shapes from video. However, it could also be that they are simply too young to complete the forced choice protocol. To understand whether these youngest of young children can learn from video, it will be important in future research to collect data from a larger number of them, given that they will have a high rate of non-response and/or use of habituation methods.

As predicted, the experimental group was significantly more likely to identify the crescent than was the control group. Specifically, compared to the control group, infants in the experimental group were nine times more likely to identify the crescent. Also as expected, there was no significant difference between the groups on their ability to identify any other shape. Because the AAP recommendation (AAP, 2001), and much of the scholarly concern, have been about children under age 2, we conducted the same analyses in children who were younger than 24 months. Though the sample was reduced, the results were the same. Among children younger than 24 months, children in the experimental group were 11 times more likely to identify the crescent than children in the control group, and there were no significant differences between the groups in their ability to identify any other shape.

The early 1990s saw an explosion of programs and videos designed specifically for infants and toddlers. Though many have expressed concern about the media-saturated nature of young lives today, surprisingly little research has investigated the developmental impact of television viewing on infants and toddlers. These products all claim to enhance infants' and toddlers' cognitive development through electronic learning, but these claims have little empirical basis. Despite this plethora of new media aimed at the very young, little is known about the extent to which children aged 2 years and younger (infants and toddlers) learn from commercially produced programs.

As previously noted, there is a consistent video deficit in children's learning, such that children learn better from live presentation than from video (Anderson & Pempek, 2005). This is hardly surprising, and few would claim that video can replace quality interaction with parents with

respect to learning in very young children. The question at hand is not whether children can learn better from parental interaction than from video, but whether they can learn anything valuable from video at all, and if so, what can they learn?

This study examined the question of whether infants and toddlers are able to learn a novel shape from video. It represents one of the first ever conducted to empirically evaluate whether infants and toddlers can learn shape identification from video.

Results indicated that young children can indeed learn to identify a novel shape from a repeated video presentation. In many ways, this is not surprising, as a host of evidence indicates that repetition facilitates pre-schoolers' and toddlers' comprehension of televised material (Barr et al, 2007; Barr, Muentener & Garcia, 2007). Thus, content matters, the nature of the content matters, and repetition matters in very young children's ability to learn from video—even those under the age of 2. This mirrors what we know about the impact of media on older children. The impact of such media is driven largely by content, and children learn specific skills and knowledge from specific content (Huston & Wright, 1997). Thus, it appears that children learn the things we teach them—even when the presentation of content is screen based.

Conclusions and Implications

Though many claim that video viewing is wasted cognitive developmental time for very young children, our findings indicate that learning from television is possible. Indeed, our findings suggest that young children, even under the age of 2, can learn from video. It is important to acknowledge that this study focused on one aspect of learning—namely shape identification. Further research on video's possible impact on language development, and abstract concepts such as relative size or far and near, are also needed.

However, the importance of these findings is clear. First, they indicate that content is key: when given content with a clear educational program, young children can learn from it. This mirrors what we know about the impact of educational content on older children. Second, with such content, video viewing among very young children can lead to real learning. Thus, video with high quality educational content may have some place in young children's lives. This study adds crucial and much needed information which can be drawn upon by parents, scholars, policymakers and those concerned with creating entertaining and educational technology for infants and toddlers. Based upon these findings, it is possible that the AAP media recommendations should be revised to include a limited and controlled amount of viewing for children as young as 18 months.

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COMMENTARY: *Don't turn that screen off yet!*

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All four of these stimulating overviews deserve applause for their thoughtful accounts of the range of theoretical and applied questions that flow from serious attention to young people's uses of media. I imagine that Greenfield will forgive me for pirating and then stretching her concluding remark: uses of *all* media need to become a major component of developmental work. She makes a compelling case for this in respect of Internet uses and her point holds for neighboring topics, too. As each of the papers here reminds us, young people devote large amounts of time, effort, affect and intellectual energy to television, videogames, electronic communications, and other new media.

If we have any pretensions to sustain a developmental science that relates to the descriptive facts of young people's everyday lives, then we need to study what our participants do and what they care about. They do a lot with media, and they certainly care about them. Importantly, it is equally clear that we cannot investigate these processes adequately without drawing extensively on the rest of developmental psychology. From different starting points, via different routes and on the basis of diverse methodologies, these four papers highlight very provocatively the issues and challenges that confront developmental work on media uses.

Let's head straight into a particularly contentious perennial: the vexed question of media violence. This is the theme around which research into media and children managed effectively to exile itself from developmental psychology. Certainly, much of the work on this topic is conducted by specialists from other areas, most often social psychology, and usually with cheerful indifference to developmental dimensions. The outcome is an emphasis on malevolent external forces magically 'shaping' innocent young targets, whether they be preschoolers watching cartoons or undergraduates signing up for a lab on videogame effects, seemingly incapable of imagining what is expected of them. For developmentalists schooled in any theory from Piaget on, or familiar with the literature on the phylogeny and ontogeny of aggression (Tremblay, 2000), this unidirectional and adevelopmental metaphor is implausible, and disconnected from everything we know about the complexity and resilience of human development.

I suggest that the findings from Kleimann and Mößle's and li's ongoing research will lead them ultimately to qualify their assumptions of straightforward media effects on something as intractable as human aggression. Indeed, their preliminary findings point usefully to some of the many other factors that need to be taken into account. They also highlight some much more intriguing issues for developmentalists.

Kleimann and Mößle describe a remarkable longitudinal study of a media education program that promises to yield invaluable evidence on how children reason about their media. I share the authors' view that media education is desirable and that educational systems have been sluggish in recognizing the importance of supporting young people in the development of critical skills for dealing with some of the most pervasive experiences of 21st century life. The excitement of their project lies in its far-reaching attempt to redress this neglect.

Kleimann and Mößle have set themselves, their teacher collaborators and their child participants an ambitious goal, namely 'to reduce electronic media usage to a reasonable time slot of not exceeding 60 minutes a school day'. Children are also to be encouraged to evaluate the media critically. It seems to me that media educators subscribing to these two goals face a poignant paradox: what happens to the hour a day limit when enthusiastic students of the media elect to do extra homework?

There is a serious point here: How do we determine what is 'reasonable'? Is 'amount of time' a valid measure of quality of experience (or, indeed, of benefits of media education)? Should the time limit apply equally stringently to the many positives that we all agree are associated with videogame play, such as improved spatial skills and eye-hand coordination (Backlund, this issue; Gee, 2008; Greenfield, 1984; Swing & Anderson, 2008)? What should we do about young people's enthusiasms—devalue them, homogenize them, repress them? Let's have less violence to their media!

More radical possibilities we might contemplate are (i) to accept that young people will find their natural level of media engagement, or (ii) to concede that they will not change their media practices in the absence of attractive alternatives. I suspect that the very idea of (i) fills some readers with outrage but, curiously, we do not have the same problem with regard to uses of non-electronic media. Whoever heard of regulating children's reading to ensure that they never exceed an hour a day? Are we alarmed that many children have books, which have much the same content as other media, in their bedrooms? Do we insist that adolescent athletes should curb their out-of-school training times lest they get too fit? Of course, balance and variety are healthy, but will young people get there via accepting a prescription from the AAP (see below) or by exploration and trial-and-error?

The thought that children might find their natural level of videogame play is even more outrageous . . . until we discover, as Kleimann and Mößle reveal, that the average amount of play is 30 minutes a day. Most international studies have obtained estimates in this region. Kids *are* regulating their play. Good educators start where the learner is and it will be instructive (to researchers) to listen to what young users of the media have to say.

Ii does exactly that, asking adolescents why they love to play videogames. The answers are often overlooked by shock horror news stories (but that's the media for you). Games are popular because they are elaborate, they are challenging and rewarding, they afford skills practice, they have mood altering potential, they are often the focus of social lives, and they can even impart a sense of self-discipline. Is the problem that kids play too much or that they do not play enough? Some adolescents, particularly girls, may be at a disadvantage here.

This is not to dispute that excessive use may sometimes be associated with developmental or interpersonal problems. Ii's findings suggest that high users of videogames may also have behavioural problems. But it seems that these young people also have over-intervening, rejecting and denying parents who are prone to meting out severe punishment. Developmental theory and research would predict behavioral problems in young people with histories of poor parenting. A brutal dad at home is a much graver threat to your development and well-being than any of the guys you'll meet on the streets in Grand Theft Auto. As Ii argues, we need to know more about the functions that games serve in these unhappy young people's lives, but we need to acknowledge the possibility that the functions are not all negative.

Perhaps another reason for the relative neglect of media by developmentalists is that it is not what we have done. Because we have not done it, or not enough, we do not train our students in how to conduct research in this area. And it is a difficult area in which to conduct research. But ours is not a field that lacks methodological creativity or resourcefulness, and the approach of Greenfield and colleagues shows what can be done if we embrace opportunities rather than avoid them as 'too hard'. Chomsky ushered in a revolution in psycholinguistics when he pointed out that language is a mirror on the mind. In revolutionary spirit, Greenfield et al. show that new media put minds and social lives on screen—and in multimedia format—offering a variety of novel and traditional ways in which developmental scientists can investigate core phenomena of adolescent development.

There are many fascinating findings emerging from their program, particularly relating to the interweaving of 'real' and computer mediated existence. I have space only to highlight one. The final participant from whom they quote captures eloquently a fact of life in a world of new media, namely that "there is no one out there with a profile that 100% matches who they really are". Is this as an indicator of the shallow nature of CMC and of young people's worlds losing authenticity in inverse relation to the growth of the Internet? Or is this nascent awareness of the multilayered nature of interpersonal life a sophisticated social cognition that the young person is going to find very useful outside of media interactions, too? Perhaps it is the outcome of autonomous media education and reflection, just as Kleimann and Mößle would advocate.

The American Academy of Pediatrics is a body in need of a refresher course in media education. Their unilateral declaration that children under two years should never see a TV set betrays an alarming disregard for the realities of everyday family life across the SES spectrum, providing guidance that could lead only to feelings of parental inadequacy and guilt. It also lacks an evidence base.

Vandewater and colleagues offer at least two important findings here. First, they note that very few parents have accepted the recommendation. Surprising news if you believe that people are shaped by the media, because the AAP recommendation has received ample and reverential press coverage (though TV companies have been mute). Not so surprising if you take the view that people are active constructors of their lives in dialectical interactions with mesosystems.

Secondly, and most interestingly, Vandewater et al. show that when evidence is sought using the techniques of developmental psychology then it turns out that young infants can acquire new concepts/ labels from television. This opens up obvious but important questions about the potential for positive uses—and positive incidental outcomes—of media at this developmental level. The authors provide sensible answers.

I'll conclude by pirating and stretching one of Vandewater et al.'s remarks: it is possible that the orthodox view of media as inherently bad for young people, irrespective of developmental status or needs, should be revised. The four papers in this set make an excellent contribution towards that goal.

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Reports from the Lab

Serious games research at InGaMe Lab, University of Skövde, Sweden

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Why do research on computer games? This is a question we have been asked quite a few times over the last couple of years. Why not? The answer is fairly simple to us. Computer games and other interactive media form an increasingly growing and important role in our everyday lives. Computer games are used throughout our society. People play on the bus, at home and at work, and we can see how computer games affect a number of areas in the society of today. To us, this makes games an excellent area for interdisciplinary research. InGaMe Lab integrates research efforts from computer science, media, cognitive science, psychology and pedagogy into innovative projects.

InGaMe Lab is a young research group. In 2004, we started our work as a loosely linked group of people who wanted to do research about computer games and game technology. Before that time, research within this area was pursued by individuals with fairly limited resources. However, as the University of Skövde had started study programs in game design in 2002, there was a need to strengthen the research efforts within the field. The research group was formally launched by the university in January 2007.

In the last couple of years we have built lab facilities suitable for the type of explorative and innovative research that we want to do. Initially, we paid most of our attention to leisure games. However, we also wanted to explore the technological boundaries of computer games. What are the possibilities of novel interaction modes and immersive visualization that come with current game technology? These experiments led us to explore the potential of applying games and game technology for purposes other than entertainment. This field is known as serious games. We simply define serious games as *games that engage the user, and contribute to the achievement of a defined purpose other than pure entertainment (whether or not the user is consciously aware of it)*. The additional purposes can, for example, be education, training, health care or marketing.

Lab Facilities and Research

The practical and interdisciplinary profile of our research is supported by a wide range of lab facilities. One common denominator for these facilities is that they are composed of game technology. This means that we are not only interested in games and their use but also in the innovative use of game technology. We also have facilities for game testing in a homelike environment. This facility comprises a full-scale apartment with camera and microphone surveillance which makes it possible to study interaction between players as well as their interactions with the game. The apartment has been used for game testing as well as teaching and research. Similarly, we have an office environment which can be used for studies in, for example, computer supported cooperative work.

The other specialization in our facilities is multi-screen visualisation. Traditionally, such systems have been exclusive, expensive and hard to use. We aim for simplicity in use by composing our system from game technology. This makes the system flexible as well as cost efficient. Another advantage with our solution is that it works with essentially any PC-based software (with some degree of adaptation). We have made successful experiments with a number of commercial games and other types of software. The most innovative application of the system is a driving simulator (Figure 1) where a real car is used as control device for any driving simulation (commercial racing game or in-house software). The number of screens used is flexible. In order to achieve the 220 by 30 degree forward field of view and 60 by 30 degree rear field of view the in-game camera has to be set.

We have chosen focus on projects which reflect practice in their fields of application. This means that we have established cooperation with various commissioners of serious games. We have investigated the relationship between games and traffic safety in cooperation with an insurance company and traffic educators. We have explored the potential of building game-based training simulators in cooperation with both traffic educators and rescue services personnel. We have developed and tested games for stroke rehabilitation in cooperation with the department for neurological rehabilitation at the regional hospital.

Figure 1. A game based driving simulator. Photo: University of Skövde.

Games for Training

One of our largest and most successful projects so far has been carried out in cooperation with the Swedish Rescue Services Agency (SRSA). The project has investigated the usefulness of serious games concepts within rescue services education. As one of the main motives for the project is to show the usefulness of serious games for the particular type of training and education carried out by the SRSA we decided to focus on the development and evaluation of a working prototype.

One of the most hazardous tasks firefighters face is to enter a building on fire and to search for victims. This activity is referred to as Breathing Apparatus Entry (BAE) and requires a systematic and thorough scanning of the building where sight may be extremely limited due to smoke. BAE training is traditionally carried out in training areas with buildings of different types where victims are replaced with dummies. These methods have been shown to be effective but they are not optimal for all situations. For one ting, they are relatively costly as they require trained instructors and access to a dedicated training area where each type of environment (e.g. hotel, ship, train, gas station etc.) requires a separate physical model. Simulator training solves the problem of students getting familiar with the physical models, as new virtual models are fairly easy to create. Furthermore, as live training sessions are costly they need to be well prepared to create high value. Hence, virtual environments form an effective and efficient complement to and preparation for real-world training in order to increase its quality. Consequently, SIDH, a game-based fire fighter training environment, was developed.

An important property of SIDH which differentiates it from traditional simulators is that it is game based. Game technology (hardware as well as software) has been used to produce the application. More important, the application itself is deliberately designed to be a game. Indeed, one important design goal is to create an entertaining and motivating experience combined with learning goals. In this way learning becomes self-motivating and the system may be used for off-hour training. SIDH also utilizes multi-screen view to surround the player by the virtual world and a novel sensor based interaction mode to put a physical load on the player. The general appearance of SIDH can be seen in Figure 2.

Figure 2. SIDH, a fire fighter training simulator. Photo: Johan Hoffman, Hoffman Adaptive.

The project has demonstrated the feasibility and usefulness of an architecture for a game-based immersive training simulator. The novel interaction mode adds to immersion by introducing physical aspects into the game. We have also shown that inherent game functionality can be used and extended to create a variety of levels with distinct learning goals, the general objective being to show the importance of systematic and efficient action in BAE. User tests have been carried out with teachers and students. The experiment was organised to evaluate *skill development in the simulated environment*, *perceived self reported learning* from the students and *judgements from experts*. Thirty-one fire fighter students, divided in two groups, participated.

Concerning the in-game skill development we had a clear learning curve between sessions. In the first session the average number of missed victims was 1.5 per player. This was improved to an average of 0.2 per player in the second session, even though the environments were more complicated. The participants also held a low position to avoid smoke 63% of the time, which suggests that the game was successful in promoting this insight. We had very positive results with respect to self-reported learning from the students. Seventy-seven percent of the participants reported having learned things related to the objective of the game. However, the interesting issue whether the learning effect from the simulator is transferable to live training and BAE entry remains to be fully investigated. We have made initial experiments where expert analysts report a slight improvement of search systematic for the group participating in the simulator sessions. However, these results are disturbed by differences in the equipment used during the live sessions where some subjects had significantly better vision provided by superior equipment.

What Do We Expect in the Future?

The results from the SRSA project have been so interesting and promising that the SRSA research fund has decided to fund InGaMe Lab by providing 250,000 Euros for further research. This will of course be one of our major under–takings for the next couple of years. Furthermore, this will make the SRSA a major commissioner of serious games in Sweden as well as in the European Union. The aim of the project will be to further explore serious games within a rescue services context and one important aspect will be to develop training methods and pedagogical guidance to go along with serious games. By doing this we hope to achieve a true integration between games and pedagogy.

The growing movement known as Games for Health (www. gamesforhealth.org) is expected to provide some really interesting challenges for serious games research. At the moment we are involved in a pilot project which studies the usability and usefulness of games and game technology for stroke rehabilitation at home. The results from other work within virtual rehabilitation project are promising. However, one major drawback so far is the utilisation of complex and expensive technologies. As the current trend is to extend rehabilitation over time and motivate patients and their relatives to carry out rehabilitation at home, new requirements will occur. We envision a flexible and easy-to-use game-based device to be placed in the patients'

homes. The use of game technology will make the device accessible and cheap. Novel (physical) interaction modes will make rehabilitation of motor skills possible. Adaptable games will increase motivation and make it possible for user groups with different abilities to play together. Internet connection will make it possible for the care givers to support and supervise the rehabilitation process in a "network for rehabilitation" which may also involve relatives and friends to increase motivation for rehabilitation over time.

To sum up, we see a growing market for serious games in Sweden and the European Union. There are more and more companies doing business within the field. We also expect more elements of games as well as serious games research in the Seventh Framework Programme (FP7) funded by the European Union.

Media Influences in Internalization of the Thin Ideal, Body Consciousness, Physical Appearance Comparison and Body Dissatisfaction among Adolescents

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Many people in today's technologically advanced society are dissatisfied with their body or body parts. Today's beauty icons in both print and electronic media have changed from traditional beauty to a skinny and thin figure among girls and a slim and muscular body size in boys. The desire to change shape or weight is common in both genders (Ricciardelli & McCabe, 2001). The girls strive for a tall, slender and curvaceous body, while boys strive for a lean and muscular body. In popular beauty contests (e.g. Miss Universe, Miss World, and region-specific, e.g. Miss India), on television and in movies, contestants, actors and actresses have become increasingly thin in recent times. The consistent depiction of tall, slim and curvaceous models in these contests and other media are extremely unattainable to most people. The discrepancy between one's actual body and ideal body size increases dissatisfaction with one's body.

Body dissatisfaction refers to negative subjective evaluation of one's figure or body parts (Stice & Bearman 2001). Both boys and girls experience dissatisfaction about their figure and body parts. Adolescent girls experience high levels of body dissatisfaction; as many as 90% want to reduce the size of their bodies (Keel, Fulkerson, & Leon, 1997), while about two-thirds of boys are about equally divided between wanting to have a smaller or larger body, and about one-third of adolescent boys do not appear to be dissatisfied with their bodies (Drewnowski & Yee, 1987; McCabe & Ricciardelli, 2001; Neumark-Sztainer, Story, Falkner, Beuhring, & Resnick, 1999). Similar results were reported in Indian boys and girls in a previous study by the authors (Saini, Goyal & Sandhu, in press).

Adolescents and Body Dissatisfaction

During adolescence both self-focus and awareness of others' evaluations of self are heightened (Lapsley, Milstead, Quintana, Flanery, & Buss, 1986) and levels of body dissatisfaction rise (Cash, Winstead, & Janda, 1986). Adolescent females are particularly vulnerable to the thin-promoting messages of the media because they are at a stage in their lives when they are seeking outside information to form their self-identity (Botta, 1999). Male body dissatisfaction is beginning to increase, possibly due to emerging social pressures for men to achieve a lean and muscular body (Harvey & Robinson, 2003), and with multimedia exposure, these trends are also seen in Indian boys. Male college students, after exposure to advertisements featuring muscular men, showed an increased discrepancy between their perceived level of muscularity and the level of muscularity that they would like to have (Leit, Gray, & Pope, 2002). Women tend to be most dissatisfied with their middle and lower bodies and their breasts, while men have been found to be most unhappy with their middle and upper bodies, particularly abdomens, chests, and upper arms—body parts that are frequently emphasized in the media (Garner, 1997; Grogan, 1999; Hoyt & Kogan, 2001). Research has shown that pressure from mass media is related to body satisfaction levels and health problems such as eating disorders (Barlett, Vowels & Saucier, 2008). Therefore, it was considered worthwhile to elucidate which factors contribute to body dissatisfaction among adolescents in India, and the present research follows on from the previous study.

Media Influences in Body Dissatisfaction

Several theories and models have been suggested to explain the evolution and persistence of body dissatisfaction. The most empirically-supported explanations for the increase in body dissatisfaction are derived from sociocultural models that identify social pressures (e.g., media, friends, family) (Stice & Shaw, 2002). The strongest sociocultural pressures that affect body dissatisfaction emanate from the mass media (i.e., print media, movies, and television) (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). The current multimedia environment is very powerful and omnipresent, leading to increased body dissatisfaction among both men and women (Derenne & Beresne, 2006). The media exert a strong influence for constructing meaning in the everyday life of people of all ages, particularly among adolescents. Each and every day we are bombarded with images of beautiful, slim and curvaceous bodies on TV commercials, serials, live shows, and the internet, and in movies, magazines and newspapers. Experimental studies have found that a single exposure to muscular and athletic male bodies can produce body dissatisfaction in males (Agliata & Tantleff-Dunn, 2004; Leit et al, 2002) and watching only 30 minutes of TV programming and advertising can alter a young woman's perception of the shape of her body (Myers & Biocca, 1992). Although it is very difficult to escape from these attractive body figures portrayed in all types of media, the most important thing is to understand which body shape is attainable and which is not, in order to avoid developing a poor body image. The portrayal of over-glamorized models

in fashion magazines, on TV and in movies sends the message that in order to be successful and accepted, one must be attractive and thin. This biased perception leads to body dissatisfaction. In the current research, we focus on the effects of both print and electronic media on body dissatisfaction among adolescent boys and girls.

Print Media and Body Dissatisfaction

Print media encourage girls to achieve a thin body through dieting but encourage boys to shape up through exercise (Heinberg, 1996). At least 50% of all teenage girls are regular readers of fashion magazines (Nichter, 2000) and the number of hours spent watching music videos is related to adolescent girls' weight concerns (Borzekowski, Robinson, & Killen, 2000). Adolescent females make comparisons between themselves and the models in magazines and they come to accept these beauty ideals as realistically attainable goals. The more they desire to attain these goals, and the more they read beauty and fashion magazines, the more they may be willing, or feel pressure, to try shortcuts or potentially harmful measures to attain them (Thomsen, Webber, & Brown, 2002). According to Botta (2003), 23.4 to 41.6 percent of variance in girls' body satisfaction was accounted for both by the amount of time girls spent looking at women's fashion and health/fitness magazines and by how girls processed the magazines' content. Botta claimed that magazine reading habits are important predictors of body image disturbances. Morry and Staska (2001) found that the reading of fitness magazines was associated with the internalization of the male ideal as physically fit, as well as with body shape dissatisfaction and disordered eating. The emergence of foreign print media with the arrival of advanced technology in India is creating a longing among youths to have a fair skin color, with a slim and curvaceous or muscular figure like the models in western media; this leads to body dissatisfaction.

Electronic Media and Body Dissatisfaction

With the foreign media invasion, youth in India are taking more interest in Western TV programs, soap operas, and music videos depicting tall, slender, and firm bodies, although not all TV programs, movies, and magazines inspire body dissatisfaction. Overall, the time spent in watching soap operas, music videos, and movies has been found to be associated with the drive for thinness in both genders (Tiggemann, 2005), especially among high school girls (Tiggemann & Pickering, 1996). Television commercials containing images of slender and curvaceous females and muscular males have a strong effect on the psyche of an individual. Botta (1999) found that high school females' tendency to compare their own bodies to those of television characters predicted increased thin-ideal endorsement, body dissatisfaction, and drive for thinness. Botta (2000) further examined the effect of television watching on girls' body image and found detrimental effects. Women's exposure to television programs and advertisements in which the ideal type is featured are related to body dissatisfaction (Tiggemann & Pickering, 1996; Botta, 2000).

Media Impact on Indian Culture

The effect of media in the Indian context is crucial because, in many parts of the country, particularly in South India, film stars are worshiped as Lords and people have even made *Mandirs* (places of worship) for such idealized individuals. Film stars like Rajnikant and Amitabh Bachchan are very popular in India. Even a single change in their lifestyles, e.g. hair style, clothing, etc. is instantly adopted by their followers. This is amazing and rarely seen in any culture around the world. The media play a very important role in spreading the latest style adopted by these idols, and most youths try to be like their superhero/heroine; this, in turn, leads to the development of body dissatisfaction. Most researchers believe that such exposure inspires social comparison processes that typically have negative effects on self-evaluation (Groesz, Levine, & Murnen, 2002). We are focusing on the influence of multimedia on the internalization of the thin ideal and the development of body consciousness, anxiety about physical appearance, and body dissatisfaction among boys and girls.

The Present Research

There have been extensive studies conducted on body dissatisfaction in females (Stice, Spangler, & Agras, 2001; Yamamiya, Cash, Melnyk, Posavac, & Posavac, 2005); however, there is a scarcity of research literature on body dissatisfaction in adolescent boys, particularly in India where very few researchers have touched upon this issue in either gender. As the scientific community in the West and in other parts of the world has noted, there is an increasing number of men who are concerned with the size and/or shape of their bodies, specifically their muscularity (Cash 1997; Mayville, Williamson, White, Netemeyer, & Drab, 2002; Edwards & Laudner, 2000); however, less is known about body dissatisfaction among boys. Some recent researchers (Jones, 2004; Presnell, Bearman, & Stice, 2004) have noted that body dissatisfaction is a substantial concern among adolescent boys and girls, among whom the desire to alter one's shape or weight is common (Ricciardelli & McCabe, 2001).

A multimedia influence scale by Cusumano and Thompson (2000) was used to study the effect of various media, i.e. print and electronic media, on body dissatisfaction. The Thinness and Restricting Expectancy Inventory (TREI; Hohlstein, Smith, & Atlas, 1998) was used to assess ideal-body internalization. Objectified body consciousness (OBC), the tendency to view oneself as an object to be looked at and evaluated by others, was measured by the OBC scale developed by McKinley and Hyde (1996). A physical appearance scale was used to measure the degree to which participants compared their bodies and physical appearance to those of others. Body dissatisfaction was measured by using the EDI subscale (Garner, Olmstead, & Polivy, 1983).

Adolescents' Internalization of Their Thin Ideal

We asked all the participants in each group about their favorite TV commercials, serials, and movies, including

their favorite actors and actresses. It was surprising to note that both boys and girls liked those commercials, TV serials and movies in which models were beautiful, fair in color, slim, firm, curvaceous and in good shape. We found that most of the girls said they liked the models most instead of the products and wanted to be like them. Similarly, when boys were asked about their favorite TV commercials, movies and actors, they liked those TV commercials and movies in which the models and actors displayed their muscularity. Boys expressed admiration for actors such as Hrithik Roshan and Salman Khan, and reported exercising regularly in order to develop muscularity similar to theirs. Before the final data analysis we found that adolescents' choice of their favorite actors/actresses was based on their body image, suggesting that adolescents internalize the image of their ideal and strive to be like them, even though this goal is unattainable. Thus young people develop a feeling of body objectifying and physical appearance comparison that results in body dissatisfaction.

Data was collected from undergraduate students studying at GJUS&T and FC College, Hisar, India, in the age range of 15–19 and from the Hindu community. Initially, participants in a group of 10–15, as shown in Pictures 1 and 2, were instructed to look for 2–3 minutes at photographs of TV performers, movie stars and commercial advertisements taken from magazines carrying thin-ideal images of men and women. All of these images were chosen by the authors and were taken from popular magazines for men and women and web sites.

Boys and girls were also shown slides depicting leading models in TV commercials, and movie actors for 3–4 minutes via electronic media before the questionnaire was administered to them. When boys and girls were asked why they chose their favorite model/actor, most of them responded that they liked the actor's appearance, including their curvaceous figure and/or muscularity and body shape. Similar findings have also been reported in other cultures and we anticipated an interesting set of findings based on the participants' strong interest in the models'/actors' body image.

Following this, the battery of questions was given to all the participants in the psychology laboratory of the department (as shown in pictures 3 and 4). Researchers have repeatedly shown that women who view thin-ideal images in the lab report a lower degree of body satisfaction than do women who view neutral images (Birkeland, Thompson, & Herbozo, 2005; Hargreavers & Tiggemann, 2004; Tiggemann & Slater, 2003). In the current research we investigated the same viewing effect on both boys and girls. Our main objective was to examine how multimedia (print and electronic) affects internalization of the thin ideal, and how it affects body dissatisfaction mediated by body consciousness and physical appearance comparisons (as shown in the model below).

The first hypothesis assumed a positive relationship between media influences on internalization of the thin ideal, objectified body consciousness, physical appearance comparison and body dissatisfaction. The results obtained substantiated the hypothesis except for objectified body consciousness, and are shown in Table 1. The findings suggest that media constitute a powerful mechanism in internalization of the thin ideal, and in the development of physical appearance comparison that leads to body dissatisfaction. Exposure to fashion and beauty magazines has been found to correlate with body dissatisfaction (Botta, 2003) mediated by thin ideal internalization (Thompson & Stice, 2001). Furthermore, experimental research has revealed a causal relationship between brief

Indian students during data collection.

magazine exposure and immediate adverse body image comparison in women (Groesz et al., 2002).

Our second hypothesis assumed media influence as the significant predictor of body dissatisfaction mediated by internalization of the thin ideal and body objectification, and findings are shown in the model below. The results pointed in the expected direction, except for a significant prediction of internalization of the thin ideal and body consciousness. This might be due to other factors such as situational effects on body objectification. However, objectified body consciousness predicted body dissatisfaction significantly. Previous researchers have also shown a weak relation between media influences and self-objectification (Harrison & Fredickson, 2003).

The subsequent hypothesis assumed media influences as the significant predictor of body dissatisfaction mediated by internalization of the thin ideal and physical appearance comparison, and findings are shown in the model above. The results were as expected; body dissatisfaction was significantly predicted by physical appearance and internalization of the thin ideal. It means that adolescents who internalize the thin ideal do compare their body physically to others', and the discrepancy between actual and idealized body size leads to body dissatisfaction. Internalization of the thin ideal has consistently been found to predict levels of body dissatisfaction and eating disturbance (Heinberg, Thompson, & Stormer, 1995; Blowers, Loxton, Grady-Flesser, Occhipinti, & Dawe, 2003). Furthermore, women who engage in frequent social comparison and who also choose ''superior targets'' (i.e. upward comparison) are also more likely to experience body dissatisfaction and possibly engage in disordered eating behaviors (Cattarin, Williams, Thomas, & Thompson, 2000; Wood, 1996).

We hypothesized gender differences in media influences on all the variables and findings, as shown in Table 1. There were significant differences in media influences, body objectification and body dissatisfaction between the genders; this shows that the media affect boys and girls differently because each gender holds different beliefs that affect body objectification and body dissatisfaction. It was interesting to note that the mean score of body objectification was higher among boys than among girls, indicating that boys feel more shame and anxiety as compared to girls when they do not match their ideal size.

The present findings are contrary to those of Fredrickson and Roberts (1997), who stated that women are socialized to see themselves as objects to be looked at and evaluated, so they are likely to feel shame and anxiety about not meeting cultural standards. This means boys in India are more anxious and are more likely to feel ashamed and see their bodies as objects to be looked at and evaluated by others. There were no gender differences on internalization of the thin ideal and physical appearance comparison, suggesting that boys and girls equally internalized the thin ideal and compared their physical body with others'. The limitation of the study might be that we could not find internalization of the thin ideal as the significant predictor of body consciousness; this might be due to personal or situational factors which may affect body consciousness; otherwise our study predicted body dissatisfaction significantly.

Despite limitations, our findings have contributed importantly to the existing research literature on the influences of media in body dissatisfaction. Media influences were found to be significant predictors of internalization of the thin ideal and body dissatisfaction mediated by physical appearance comparison. Body consciousness was also significantly related to body dissatisfaction. The results of the research indicated that youth in India are also vulnerable to the glamorized world of fashion and media portrayal, which affects their young minds through the mechanisms shown in the model. Although it is generally presumed that girls are more vulnerable to media exposure, our results indicate that boys in India are equally if not more vulnerable to media impact; therefore prevention and treatment programs should be targeted to both genders. Future research is suggested to study individual and situational risk factors to better understand the effects of media exposure in the development of body dissatisfaction among adolescents in a country such as India. The current research on body dissatisfaction in India is very timely and important as many upcoming movies in India will feature male and female body idols.

Table 1. Means and Standard Deviations of multimedia influences, internalization of the thin ideal, objectified body consciousness, physical appearance comparison and body dissatisfaction of boys and girls

	Male (N = 106)	*Female (N = 93)*	
Variables	*Mean (SD)*	*Mean (SD)*	t
Multimedia influences	34.2 (9.3)	30.9 (8.9)	2.5**
Internalization for the thin ideal	154.1 (57.1)	159.0 (48.6)	0.66
Objectified body consciousness	15.3 (7.5)	13.4 (3.7)	2.2*
Physical appearance comparison	88.9 (21.5)	89.9 (20.1)	0.36
Body dissatisfaction	102.0 (33.1)	77.9 (33.6)	5.13**

*$p < .05$; **$p < .01$.

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Notes from The President

Celebrating Our Strengths and Strengthening Our Weaknesses

As I write this, I'm still reflecting on the wonderful memories of the biennial meeting in Würzburg, Germany. (And check out the photos on the ISSBD 2008 website!) Wolfgang Schneider, Program Chair and his highly effective team of colleagues created a wonderful meeting for the 1140 of us who registered for the meeting! From the opening Welcome and Reception through to the Farewell Reception, we encountered many new ideas, lively discussions, and warm relationships. ISSBD 2008 Würzburg introduced us to the wonderful local wines, local history and cuisine, and friendly Franconians. From the stimulating opening lecture by Michael Tomasello through to the last symposia, we were treated to rich presentations and discussions. Thanks to all the ISSBD members who helped review programs as well as the presenters and other participants; you contributed to outstanding learning experiences for us all.

Among the highlights at the meeting was the Awards ceremony during the business meeting (see more detailed article in this issue). It was a pleasure to honor our members for their outstanding contributions to developmental science and to ISSBD. We also congratulated the newly elected Officers: Wolfgang Schneider—President-Elect, Katariina Samela-Aro—Secretary General (who has already been working on the EC meetings this week), Ingrid Schoon—Treasurer (who began her work last Fall), Xinyin Chen—Membership Secretary; and new Executive Committee Members: Toni Antonucci, Ulman Lindenberger, and Ann Sanson. I note with appreciation and delight that Toni and Ulman expand our scholarly breadth with their expertise across the lifespan.

At the Business Meeting on Wednesday, we also formally thanked several outgoing Officers and Executive Committee members for their outstanding service to ISSBD. These include Rainer Silbereisen (who concludes 20+ years serving ISSBD in various important roles including President), Jari-Erik Nurmi (Secretary General 2002–2008, and earlier as an EC member), Marcel van Aken (Treasurer and Membership Secretary 2006–2008, and continuing on the EC as well as editing IJBD), and three outgoing Executive Committee Members who have served from 2002–2008: Xinyin Chen, Abraham Sagi-Schwartz, and Peter Smith. We are most grateful to all of you for the strong contributions you have made to ISSBD.

I appointed several ISSBD Committees in 2006 and 2007: Awards 2008 (Avi Sagi-Schwartz, Chair), Finance (Elizabeth Susman, Chair), Membership (Ann Sanson, Chair), Nominations 2007 (Rainer Silbereisen, Chair), Publications (Andy Collins, Chair), Regional Workshops (Suman Verma and Catherine Cooper, Co-Chairs), Fellowship Awards (Peter Smith, Chair), and the Ad Hoc Subcommittee of the Executive Committee (Arnie Sameroff, Chair). I am grateful to all the chairs and the many members who serve on each committee. The Publication and Finance Committees have been especially active in the past couple of years and have provided excellent service to ISSBD.

Broad issues for ISSBD

International Membership. One theme I have tried to emphasize from the outset in my ISSBD presidency is our responsibility as a truly international organization. We must continue our strong representation from the US, Canada, and the many countries in Europe. In addition, we must continue the scientific excellence seen in our biennial meeting programs and flagship journal, IJBD. At the same time, we have members from more than 60 countries. Our Newsletter Editors play a valuable role in identifying important work being conducted all over the world, and provide the support needed for many authors to have their first publication in this outlet. We could do more with our website, but what precisely should we do? I believe that it's likely that we must do more to serve our many members beyond North America and Europe. Considering countries, the US has the most members, followed by China and India. Many of our Chinese and Indian colleagues are unable to join us at the biennial meeting, a major place for communicating with each other. Are we serving members whose primary link with us is through our publications (and perhaps through regional meetings, though we have no data on how many members are served in this way)?

We have now split the huge role of Treasurer and Membership Secretary, so that both financial and membership questions can receive more attention. Xinyin Chen is the new Membership Secretary, who I know will attend to these issues. We also have a new Membership Committee chaired by Ann Sanson, again bringing new vigor and interest to the issues. What else should we consider?

In my experience, scholars in the "developing" world (or currency-restricted countries) are called upon to play many more roles than those of us in North America and Europe. Having an academic position that permits focusing primarily on research is rare in Asia and Africa, to my knowledge. Our Asian and especially African colleagues typically have heavy teaching responsibilities and are also called upon to provide advice for policy and practice. While I believe that sharing the latest research is a valuable role for those in wealthier countries to play for other ISSBD members, is this sufficient? Are there other needs that we could be addressing but are not now? That seems likely. What are they? How could we best provide forums for these discussions? A workshop at the Würzburg meeting led by the Regional Workshop Co-Chairs, Suman Verma and Catherine Cooper, made a number of excellent suggestions that they will describe in the next issue of the newsletter.

A recent suggestion from EC Member Serdar Degirmencioglu was for a publication (either a journal or a journal section) on policy issues. Presumably a policy focus would draw on research and be international (rather than national, though national examples could be used. The Newsletter Editors are considering whether they might do this. Should we also use the website for such discussions? Should we have a committee to focus on policy? (SRCD has had such a committee for some time, and publishes *Policy Report*, primarily on US issues.) Should ISSBD consider doing something like this? I will likely appoint a group to consider these issues. Please let me know if you are interested, and what your thoughts are.

Lifespan Breadth. With our new strength on the EC in adulthood (in new EC members Toni Antonucci and Ulman Lindenberger), we can begin to consider how to reposition ISSBD within the total lifespan. What should we be doing? In my Fall 2007 Newsletter article, I suggested that we needed to move vigorously to "expand our knowledge of human development over the life span/course. Our vision is of a field of human development, not a collection of specialists who study various ages." What processes recur over the lifespan? Some of our colleagues are pursuing these questions. Is ISSBD playing a role in pushing the frontiers of knowledge on human development? I do not believe we are doing enough. Our international breadth would

seem to give us additional strength in doing this. How can we strategically exploit our strengths? I will be asking a small group to consider how we might best pursue these issues. Again, please let me know if you are interested, and what your thoughts are.

Multidisciplinarity. We continue to be primarily focused in psychology as a discipline. I acknowledge that psychology has become a vast discipline (for example, in the US there are 150,000 members of the American Psychological Association, as large as all the other US social/behavioral science organizations taken together). Research findings tell us that fields that draw from their boundaries as well as their center are the ones that continue to have new discoveries and remain vital. We should take steps to assure that our members have access to the most important findings from related fields. If it is difficult to recruit members from related fields—an assumption that I do not believe we have tested—we should at least draw relevant scholars as speakers at our meetings and as contributors to our journal. I will be asking key colleagues to consider these disciplinary and lifespan issues as part of biennial meeting planning, IJBD, and membership. In addition, please let me know if you are interested and what you believe we should be considering.

Young Scholars. Again I noted in my Fall Newsletter article that ISSBD has engaged young scholars in an effective way. Young scholars have organized themselves into a highly effective group, and led a number of activities at the recent meeting in Würzburg. I attribute to their strength the fact that some of the Young Scholar leadership are now represented among ISSBD Officers. We will further formalize young scholar representation on the Executive Committee through election of young scholar reps. Zena Mello has been doing an outstanding job recruiting young scholars to serve on every ISSBD committee. She will continue as the Ad Hoc rep on the EC for another couple years, and will overlap with a young scholar representative to be chosen in our next election.

Thanks to all of you for making ISSBD successful! ISSBD is an organization of volunteers. Your efforts expended on behalf of the organization are important to our success! Please contact me with any interests in contributing your time or ideas. Thanks! apetersen@casbs.stanford.edu.

Anne C. Petersen, *President*
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Editorial

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Conference Report

Report on the 20th ISSBD Biennial Meeting, Würzburg, Germany, July 13th–17th, 2008

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This year's ISSBD Meeting, at least to me, was exhausting! So many things to do and so little time! And I'm not just talking about the conference . . . Würzburg, a lovely baroque city, full of interesting landmarks, with a flowering culture rich in local traditions, was, in itself, a special experience too. Especially with all its history, good German food and (even better) Franconian wine, produced nearby in the region's many vineyards. The local people are also great—just in case you were wondering! They were friendly and warm, making us feel really welcome. Or was it just my impression? Hmmm, I doubt that . . . Amazingly enough, on more than one occasion I kind of lost track of where I was. Well, it seemed there was always someone willing to take the time to give me directions, sometimes even without my having to ask. At times, they even took the trouble to take me to a specific place they thought I should see, doing their best to explain why and how it was important! At least to me this happened more than once, as incredible as it may seem!

Yet, this was not why I went there nor is this the main subject of my report. I'm supposed to tell you all about the conference or, at least, as much as possible, in the limited amount of space I have for it. So let me start from the start: the Meeting's two days of preconference workshops. Mostly, I'll focus on one of them (as I just said, it would be impossible to talk in detail about everything that went on), "Developmental Social Cognitive Neuroscience". At its end, participants, even novices to the field, came out with the feeling that they already had an idea of the major debates going on in the field. Lectures, supported by assigned readings with open (and active) discussions by participants, followed by work in small groups were the methods adopted. Each small group was asked to consider the major topics presented and then to come up with a related research question—interesting, no? Given that most participants had just arrived from their countries—and some had traveled really long distances—organizers made sure to provide an ample supply of coffee, tea, snacks . . . Naturally, when you have food and drinks, people mingle! So, no wonder participants (specially young scholars), seemed particularly open to interaction, even though, it is important to stress, group facilitators were always very open to questions attendees might have. On the whole, this created a relaxed and cordial atmosphere, pretty much informal and extremely open to sharing ideas and knowledge—in other words, a great mood for learning.

All of this even before the main conference started! Please remember that the main conference only began on Sunday, July the 13th, with its Opening Ceremony. There, the organizers presented us with a beautiful gala, filled with classic music interpreted by the University's Academic Orchestra. What could be more appropriate than to have an academic orchestra saluting scholars taking part on a scientific event occurring at an old universitarian city? Immediately afterwards followed the Meeting's first keynote address. In a most interesting and appealing way the speaker talked about how we humans are biologically adapted for embarking on various kinds of collaborative and joint intentional activities, including linguistic interaction—*i.e.*, cultural practices, like taking part of a scientific conference. Such joint projects require us to be able to understand others as intentional beings with whom we can share emotions, experiences and collaborative actions, and isn't that what a conference is all about? Sharing ideas, experiences, research methods . . . And a lot of that went on! How so? Well, let us see: The conference featured seventeen distinguished keynote and invited speakers, coming from all parts of the world and focusing their addresses on a variety of issues relevant to human development in today's (changing) world. Participants also had the opportunity to choose between fourteen state-of-the-art invited symposia, one hundred and ten regular symposia and nine more poster workshops. Additionally there were nearly six hundred posters focusing on over thirty different themes. Huge, right? But we must not forget that one of the ISSBD's most distinctive features is being a "truly international organization". No wonder, then, that its conference not only reflects the scientific, cultural and epistemological diversity of its members, but is also capable of attracting many others willing either to just attend it or present their work, thus adding to the variety and richness of its program. Again, using the idea presented in the first keynote address, the Meeting's scientific program offered participants many opportunities to discuss with others who share their research interests, experiences, and

Picture 1. Filomena Parada speaking at the Young Scholars Initiative.

Picture 2. Staff members seemed to be everywhere, and always available to give us a helping hand!

Picture 3. The Academic Orchestra Ludwig van Beethoven playing at the Opening Ceremony.

curiosities, our vision of where we come from, where we stand and where we might be heading when it comes to understanding human development in all its fullness and depth.

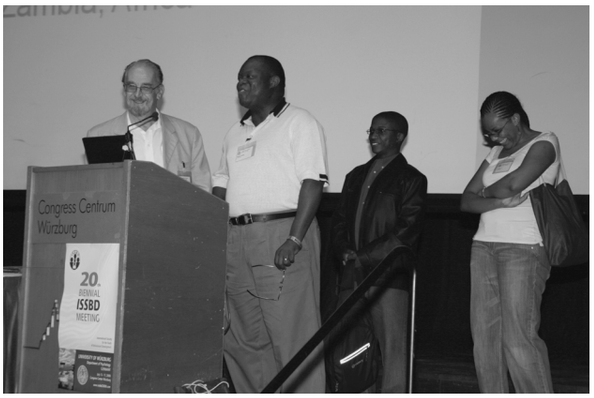
Nevertheless, this is not all I have to tell! One of ISSBD conference's unique features has to with the many opportunities it gives to its delegates to interact on and debate issues of their choice and interest. A good example is the "Meet the Scientist" appointments. There, young scholars had the opportunity to meet with conference's keynote and invited speakers and discuss with them, in an informal atmosphere, several themes of their mutual interest. In fact, putting young and senior scholars in contact, giving them space to get to know and learn about each other's experiences, and, above all, to have juniors profiting from more experienced researchers' expertise is something that ISSBD takes really seriously! Throughout Monday afternoon there were a number of activities devoted to those whom the Society designates as "Young Scholars". Again, because it would impossible to describe them all in detail, I'll focus my attention on one in particular—the Young Scholars Initiative. What an exciting experience! Participants (young and senior) with (very) different backgrounds (in terms of their culture, theoretical and methodological approaches or, even specific research problems), organized into small groups according to their interests, had the opportunity to present their research and discuss it with some of the leaders in their respective field of knowledge in an informal, warm and vibrant atmosphere. At the same time, they got to meet other young researchers with similar interests to their own, and, thus, start networking. Perhaps the best description I can give you of what went on is saying that, more than being just another fruitful discussion (of which the conference offered many) the Young Scholar Initiative worked as a "laboratory of ideas" for all those involved. Hopefully, new things will come out of what went on that afternoon!

Clearly, it would have been impossible to have that many young scholars attending the conference—and even many others that did not qualify as such—if the organizers had not made a special effort to get scholarships from funding organizations (especially in the US) for participants coming from all over the globe. Yet, justice has to be done and I must say that, even though many participants applied for financial aid, the priority was given to those coming from former socialist countries in Europe and from developing countries worldwide, something greatly appreciated by the delegates. For many of these participants it is not always easy to obtain grants allowing them to take part in events such as this one, even though it's vitally import-

Picture 4. A room filled with attentive scholars, listening to one of the interesting keynote addresses offered by this year's ISSBD Meeting.

Picture 5. Dr Anne Petersen, ISSBD's president.

Picture 6. Dr Wolfgang Schneider, Conference Chair and ISSBD's elected president.



Picture 7. A delegation of ISSBD's 21st Meeting organizers, headed by Dr Robert Serpell.

ant, given the professional growth opportunities it provides.

Knowing where the money is or where it may come from is always important when you want or plan to do some serious research! The same thing happens when it comes to publishing, right? You have to know your way around the system so you know what you *must* and *must not* do while trying to be successful at publishing a manuscript. Well, even that was taken into consideration. The Meeting organized "Meet Simon Sommer from the Jacobs Foundation" and "Meet the Editors" sessions . . . And, by now, I believe, I've mentioned it all! Well, not all, but at least all the major topics so that all of those who attended can remember it and all those who could not go there are able to get an idea of what went on. Tiresome, no? I told you right at the start! But nevertheless, it's exciting and really making us curious about ISSBD's next Meeting in Zambia or, again, is that just me? Hmmm, I don't think so . . . Meanwhile, pay attention to everything else that is going on: workshops, forums, mentor programs, fellowships for developing countries, and lots of activities in the Young Scholars' department . . . All sorts of things that make an institution like the ISSBD active and alive, pulsating with energy and ideas for all those willing to get involved. Obviously, none of this would have been possible without the Society's current president and next president, two key elements for the success of this Meeting—respectively, Dr. Anne Petersen and Dr. Wolfgang Schneider. So, until Zambia in 2010? To all of you who might not be aware, it's there that ISSBD's 21st Biennial Meeting will take place, two years from now. I have to admit, I'm looking forward to it. I hope all of you are, too! So, until then . . .

Acknowledgement

All photos were taken by Dr. Hans-Peter Trolldenier, Felicitas Kopere, Melanie Kemper, University of Würzburg, Germany.

Report on EC Meeting

Minutes of the ISSBD Executive Committee Meeting and General Business Meeting: Würzburg, Germany, 2008

Times: Executive Committee Meeting (EC)
July 13th, 9.00–17.00
General Business Meeting (GBM)
July 16th, 16.00–18.00

Members of the EC present: Marcel van Aken (Acting Treasurer/Membership Secretary/EC Member, Editor IJBD), Xinyin Chen (Incoming Membership Secretary), Silvia Koller (Appointed EC Member), Zena Mello (Appointed Member, Young scholar representative), Joan Miller, Bame Nsamenang (Appointed EC Member), Jari-Erik Nurmi (Secretary), Anne C. Petersen (President), Katariina Salmela-Aro (Incoming Secretary), Arnold Sameroff, Ann Sanson (Incoming EC Member), Wolfgang Schneider (Incoming President-elect), Ingrid Schoon (Incoming Treasurer), Rainer K. Silbereisen (Past President), Susan Verma (Appointed Member)

Editors present: Marcel van Aken, Kerry Barner (Sage)

Apologies for absence received from: Toni Antonucci (Incoming EC Member), W. Andrew Collins, Serdar Degirmencioglu, Ulman Lindenberger (Incoming EC Member), Avi Sagi-Schwartz (Outgoing EC Member), Peter K. Smith (Outgoing EC Member).

In attendance for particular items: Bonnie Barber, Karina Weichold, Robert Serpell, J. Jere-Folotiya, Sidney Mwaba, Lawrence Kopa, Betsen Kaani (XXIst Meetings).

Phone: Elisabeth Susman (chair, Finance Committee), W. Andrew Collins (chair, Publications Committee).

1. Opening

The President, Anne C. Petersen, welcomed all present.

2. Minutes of the EC meeting in 2007

The Minutes of the EC Meeting in 2007 Boston, US were approved unanimously.

3. President's Report

The President, Anne C. Petersen, summarized her written report for the Society in the following words: "I thank all those who have given so generously of their time to the ISSBD in the past two years. The ISSBD is a wonderful global organization, with a very special niche in advancing scholarship." She expressed her gratitude to the volunteers who make the ISSBD's activities possible.

Present at the all-day meeting on Sunday July 13, 2008 were both the outgoing and incoming members of the Executive Committee (EC), plus committee chairs (representing many other volunteers). Congratulations were once again extended to the newly elected Officers and EC Members: Wolfgang Schneider—President-Elect, Katariina Salmela-Aro—Secretary General (who had already been working on the EC meetings during that week), Ingrid Schoon—Treasurer (who began her work last Fall), Xinyin Chen—Membership Secretary; and new EC Members: Toni Antonucci, Ulman Lindenberger, and Ann Sanson. The President noted "with delight" that Toni and Ulman bring much needed expertise on adult development (including aging).

At the Business Meeting on Wednesday the President formally thanked several outgoing officers and Executive Committee Members for their outstanding service to the ISSBD. These include Jari-Erik Nurmi (Secretary General 2002–2008, and formerly an EC member), Marcel van Aken (Treasurer and Membership Secretary 2006–2008, but continuing on the EC), and three outgoing Executive Committee Members who have served from 2002 to 2008: Xinyin Chen, Abraham Sagi-Schwartz, and Peter Smith. Most of them are already continuing their ISSBD work. She expressed her gratitude to all of them for the strong contributions they have made to ISSBD.

The President had also appointed several ISSBD Committees in 2006 and 2007: Awards 2008, Finance, Membership, Publications, and Regional Workshops. Nominations is a Standing Committee of the EC and was also active during this period. There was an ad hoc Committee (a subset of the EC) to review proposals submitted for the 2010 Meeting. She expressed her gratitude to all who had agreed to serve. The 2008 Awards, Regional Workshops, Publications and Finance Committees had been especially active and their chairs had provided reports with recommendations for the present meeting. Other committees would start their work at this meeting. The list of committee charges, chairs, and members is attached.

Finance Committee
Liz Susman (chair), Jaap Denissen, Brett Laursen, Susana Mendive, Ingrid Schoon and Anne Petersen, ex officio.

This committee works with the Treasurer to review investments and develop investment policy, and to provide advice on D&O insurance, US non-profit filings, and financial transactions and institutions.

Membership Committee
Ann Sanson (Chair), Margarita Azmitia, Serdar Degirmencioglu, Astrid Poorthuis, Olga Solomontos-Kountouri, Xinyin Chen (ex officio), Carolina Lisboa, Paul Oburu and Anne Petersen, ex officio.

This committee works with the Membership Secretary on membership recruitment strategies, including reaching better coverage of the lifespan; greater diversity of fields; improved recruitment of human development scholars beyond the US, Canada, and Europe while retaining these members; and more young scholars.

Publications Committee
Andy Collins (chair), Jesus Palacios, Jacqueline Goodnow, Joan Grusec, Loreto Martinez, Jonathan Santo; ex officio: Marcel van Aken (IJBD), Karina Weichold and Bonnie Barber (Newsletter), Kerry Barner (Sage), Nadia Sorkhabi (Web Content), and Anne Petersen..

The Publications Committee will oversee all ISSBD publications including the IJBD, the Newsletter, and web content.

Regional Workshops Committee
Suman Verma and Catherine Cooper (co-chairs).

This committee works closely with the Membership Committee, and the Membership Secretary. The Regional Workshop Committee studies present practices and makes recommendations about best ISSBD practices going forward.

Awards Committee 2008
Avi Sagi-Schwartz (chair), Serdar Degirmencioglu, Nadine Messerli-Burgy and Joan Miller

This committee invites nomination for ISSBD awards and decides the final award winners. It also makes any suggestions for changing the awards.

International Membership. One theme the President has emphasized from the outset of her ISSBD presidency is the responsibility of the ISSBD as a truly international organization. The ISSBD must continue to demonstrate its scientific excellence, as seen in its biennial meeting programs and in its flagship journal IJBD. The ISSBD Newsletter Editors play a valuable role in identifying important work being conducted all over the world, and provide the support needed for many authors to achieve their first publication via this outlet. More could be done with the ISSBD website. The President believes that the ISSBD must do more to serve its many members outside of North America and Europe, at the same time as continuing to serve and retain these traditional members. Considering membership by country, the US has the most members, followed by China and India. Many of our Chinese and Indian colleagues have been unable to attend the biennial meeting, a major place for communicating with each other. Is the ISSBD serving members whose primary link with the organization is through its publications? Perhaps this can be done through regional meetings, though no data exists on how many members are served in this way.

The huge role of Treasurer and Membership Secretary has now been split so that membership questions can receive more attention. (The Treasurer's responsibilities are vast, a point to which we will return later.) Xinyin Chen is the new Membership Secretary, responsible for these issues. A new Membership Committee now exists, chaired by Ann Sanson, again bringing new vigor and interest to the issues. What else should the ISSBD consider?

In the President's experience, scholars in the "developing" world (or currency-restricted countries) are being called upon to play many more roles than are those of us in North America and Europe. Occupying an academic position that permits primarily focusing on research is, to her knowledge, rare in Asia and Africa. Typically, these scholars have heavy teaching responsibilities and are also called upon to provide advice for policy and practice. While the President believes that sharing the latest research is a valuable role for those in wealthier countries to play for the benefit of other ISSBD members; is this sufficient? Are there other needs that the ISSBD could be addressing? This seems likely. What are these needs? How can the ISSBD best provide forums for these discussions?

A recent suggestion from EC Member Serdar Degirmencioglu was for a publication (either a journal or a journal section) on policy issues. (Presumably a policy focus would draw on research and be international rather than national, although national examples could be used.) The newsletter editors are considering whether they might do this. Should the ISSBD website be used for such discussions? Should a committee be appointed to focus on policy? (The SRCD has had such a committee for some time, and publishes *Policy Report*, primarily on US issues.)

The President hopes that consideration can be given to the broad and specific issues mentioned below.

Lifespan Breadth. With the EC's new strength regarding adulthood (with new EC Members Toni Antonucci and Ulman Lindenberger), consideration can be given to how to repositioning the ISSBD within the context of total lifespan. What should the ISSBD be doing? In her Fall 2007 Newsletter article, the President suggested that we needed to move vigorously to "expand our knowledge of human development over the life span/course. Our vision is of a field of human development, not a collection of specialists who study various ages." Is the ISSBD playing a role in extending the frontiers of knowledge on human development? The international breadth of the ISSBD would seem to give us additional strength in doing this. How can our strengths be strategically exploited?

Multidisciplinarity. The ISSBD continues to be primarily focused on psychology as a discipline. The President acknowledges that psychology has become a vast discipline (for example, in the US the American Psychological Association has 150,000 members, as many as all the other US social/behavioral science organizations taken together.) Research findings indicate that fields that draw on the margins as well as the center are the ones that continue to produce new discoveries and remain vital. We as an organization should take steps to assure that our members have access to the most important findings in related fields. If it is difficult to recruit members from related fields—an assumption that the President does not believe we have tested—we should at least attract relevant scholars as speakers at our meetings and as contributors to our journal.

Young Scholars. Again the President noted in her comments at this meeting last year and in her Fall Newsletter article that the ISSBD has engaged young scholars in an effective way. They have organized themselves into a highly effective group. She attributes their strength to the fact that some of the Young Scholar leaders are now represented among ISSBD Officers. Previously she proposed that we have an explicit position for a Young Scholar among the at-large members of the EC. Perhaps that issue should now be discussed. She asked for comment from the young scholars.

Emerging Issue: Support for financial functions. The ISSBD has some serious issues to discuss regarding the approach taken to ISSBD finances. In this time of concern about terrorists, many countries (and especially the US and the UK) have greatly restricted banking practices, making it more difficult to for non-citizens to play a role in financial transactions. We are working on options as we learn about recent guidelines. (In the US these were enacted at the beginning of 2006, with no notification of changes to ISSBD officers.)

The President concluded the report where she began by thanking everyone present. The ISSBD is an organization of volunteers. The effort expended on behalf of the organization is important to its success!

4. Secretary's report

Jari-Erik Nurmi reported that the Secretary's office has been involved in many activities in running the Society, such as preparing agendas and minutes of the Executive Committee meetings, answering a variety of questions from the members of the Society, being involved in the development of the Society's new system for on-line voting, disseminating information about the Society to other societies and international journals, providing the organizers of the Biennial Meetings with information about the Society, and furnishing the President and other officers with information concerning the Society's by-laws, previous decisions and other organizational matters.

In addition to these activities, the Secretary has arranged the elections of the President-elect (2008–2010; President 2010–2014, Past President 2014–2016), Secretary General (2008–2014), Treasurer (2008–2014), Membership Secretary (2008–2014), and three new Executive Committee members 2008–2014, in concert with Past President Rainer K. Silbereisen.

The candidates elected to serve were:

President-elect (2008–2010; President 2010–2014, Past President 2014–2016)
Wolfgang Schneider

Secretary General (2008–2014)
Katariina Salmela-Aro

Treasurer (2008–2014)
Ingrid Schoon

Membership secretary (2008–2014)
Xinyin Chen

Three new Executive Committee members (2008–2014)
Toni Antonucci
Ulman Lindenberger
Ann Sanson

The EC unanimously approved the Secretary's report.

5. Report from the Membership Secretary Marcel van Aken

It is the Society's aim and priority to grow and retain the membership of ISSBD, with a focus on persuading lapsed members to renew. The renewal campaign for 2008 is still underway and includes email alerts and five renewal letters.

Membership at the end of 2007 stood at 896. As per trends, membership tends to dip in the years when there is no Biennial Meeting and 2007 is no exception. The key opportunity to recruit new members is at the Biennial Meetings. Of the 850 delegates at the 2006 conference in Melbourne only 190 were ISSBD members.

6. Report from the Treasurer Secretary

The Acting Treasure Ingrid Schoon reported to the EC as follows:

Thanks are due to the Institute of Education at the University of London for providing space, infrastructure, and staff support for the work of the Acting Treasurer. Thanks go to Wendy Robins for her assistance in preparing this report. Thanks are also due to Marcel van Aken for his excellent services as the ISSBD Treasurer between 2005–2007.

The transition to new financial management initiated in October 2007 has been unexpectedly complex and time-consuming, due to a changing financial climate following recent political events. Financial transactions, particularly those involving foreign individuals and entities, are facing tougher controls and regulations. US Banking activities require US residency, making it difficult for the new Treasurer, based in London, to access existing accounts. A new Society account has to be opened in the UK, which again proves time-consuming. The existing account in the US has been kept alive, to guarantee a US base for the ISSBD. Issues to be considered in any transfer of funds from the US to the UK concern tax status and legal status, in addition to variable exchange rates and potential transfer fees.

No changes were made in the investment portfolios, which were carefully assembled under the wise guidance of Brett Laursen. Although the investments are well diversified, I would urge the Executive Committee to have a professional review undertaken as soon as possible. We are losing revenue, especially through our investment account with the Bank of America (although it has been catching up recently). We also have a large deposit ($230k) in our checking account which does not bear any interest. An audit of accounts is highly recommended, and preparations for an audit have started in collaboration with an experienced accountant.

Despite losses in our investments due to turmoil in the global banking system, the Society's finances are still in good shape. Member dues and royalty payments should remain at the current level for at least the next couple of years, partly because the finances of the Society are sound, and partly because we expect attract a larger membership in the years to come. A review of how best to build on the existing investment portfolio, how best to manage our accounts, and how best to monitor our income and expenditure should be considered by the Executive Committee. A financial review and audit would be helpful to gain a better understanding of our financial dealings and options. One crucial step in facilitating proper management of our accounts is to establish a central and permanent office for handling the finances of the Society.

The report of the Treasurer and the accounts were approved unanimously by the EC.

7. Publications

7.1. International Journal of Behavioral Development

All issues of the Journal were published on time in 2007 and we are on track for timely publication of all issues in 2008. It has been a particularly busy and fruitful year for SAGE and ISSBD with the transition of editorship from Bill Bukowski to Marcel van Aken at the end of 2007.

On December 1, 2007 Marcel van Aken took over as Editor of the *IJBD* for a 6-year term. The EC welcomed a familiar face in the role of Editor. Furthermore, the EC welcomed a new team of Associate Editors, including Bill Bukowski as Editor for the Review Section, Brett Laursen as Editor for the Method & Measures Section, Jaap Denissen, Nathan Fox, Susie Lamborn, Olivier Pascalis and Silvia Sorensen. An increase in the IJBD budget from $25,700 to $31,500 was approved. In the discussions that followed, Marcel van Aken was gratefully acknowledged.

7.2. Newsletter editors' report

Since March 2007 three new issues of the Newsletter have been published (focussing on aggression, May 2007; sports, November 2007; and romantic relationships, May 2008). The past year has been very productive. The editors were grateful to all the authors for their excellent contributions to these ISSBD Newsletters. They were happy to be able to include authors from a variety of nations around the globe who reported on their recent scientific activities. Cooperation with the publisher, especially Kerry Barner, has been very positive. A lot of positive feedback has been given on the Newsletter and in particular on the lively reports from the lab.

The editorial team is looking forward to compiling the next issues of the ISSBD Newsletter and to continuing in close and fruitful cooperation with the Society and its President, Anne Petersen, as well as the entire EC, and SAGE.

The report of the Newsletter editors was unanimously approved. Moreover, it was decided that Karina Weichold will act as the main editor of the Newsletter, and Bonnie Barber will continue as consulting editor.

7.3. Publisher's report

Kerry Barner from Sage presented a detailed Publisher's report on the IJBD, including topics such as the Journal's editorial, production, promotion, marketing, subscription and circulation services. The report stimulated discussion on a variety of topics among the Members of the EC. For example, various possibilities for developing the IJBD were discussed as a way of increasing the impact factor of the Journal. The final phase of the website improvement, which involves online voting, is close to completion and we are currently doing in-house testing of the system, followed by external testing before launching it in autumn 2008. The EC applauded Kerry Barner's and Sage's excellent report and their active efforts to find means to promote use of the IJBD.

8. Biennial meetings

8.1. XXth Biennial meetings in Würzberg 2008

Wolfgang Schneider reported on the final outcome of the Würzberg meeting. Besides being successful scientifically, the meeting attracted 1200 participants from 55 counties attended the Meeting. Eighty young scholars were approved. In addition, two excellent preconferences took place before the meeting.

The EC applauded Wolfgang Schneider and his team for their splendid efforts in organizing the XXth Biennial meetings.

8.2. XXIst Biennial meetings in Lusaka, 2010

Robert Serpell and his team introduced the Lusaka meeting to take place in Zambia. It will be the first conference in Africa. It will be a big challenge but the group was positive. They have progressed well in the planning of the meeting. It was decided that the conference will be held in the last week of July.

They will also arrange tourism packages. Zambia boasts some of the continent's most impressively stocked game parks (Luangwa, Kafue, etc.) which can be reached by road or by air and offer a range of accommodation from luxury lodges to camping sites.

Post-conference tourism packages will be advertised on the conference website and organized by a sub-contracted events organizing firm. The Committee is already in touch with several Lusaka-based candidate firms, which have extensive experience of organizing conferences and tourism. The conference has a webpage: www.unza.zm

The EC applauded the team's efforts in organizing the XXIst Biennial meetings and for their splendid work.

8.3. XXIInd Biennial meetings, 2012

President Anne C. Petersen reported that she has received some preliminary proposals. Moreover, there was also discussion that the conference should be held in the US or in Canada. The final decisions between proposals should be taken prior to the 2010 EC meeting in Lusaka.

9. Workshops

9.1. Preliminary report from EC Advisors Suman Verma and Catherine Cooper on a survey of regional workshops and activities

The EC thanked Suman Verman and Catherine Cooper for their very informative report. The principles according to which workshops should be organized were discussed. The EC decided that the Society should produce instructions for organizing workshops and that these be published on the website.

9.2. Future workshops: Kenya

The 8th African regional workshop proposal will be held from November 30, 2009 to December 2, 2009 and hosted by Maseno University, Kisumu, Kenya. The venue will be the Kisumu Hotel (Maseno University Conference Centre).

Dr. Paul Odhiambo Oburu (Chair). The workshop Theme will be Building African Graduate Students' Capacity in Human Development Research.

9.3. Future workshops: China

Theme: Social and emotional development in societies undergoing change. July 22–24, 2009. Hosted by the Research centre for Learning science, Southeast University, Nanjing, P. R. China.

Organizers: Prof Zuhong Lu, Co-Chairs: Huichang

Chen, Beijing Normal University and Xinyin Chen, University of Western Ontario, Canada.

It was approved that the China and Kenya workshops will each receive 40,000 USD.

10. Committees

10.1. Old and new committees

President Anne Petersen introduced the EC ISSBD Committees and their chairs.

ISSBD Committee Charges

Awards

Avi Sagi-Schwartz, Chair; Serdar Degirmencioglu; Nadine Messerli-Burgy; Joan Miller.

This committee solicits and reviews nominations for ISSBD awards, and selects the awardees who are announced at the biennial meeting.

Finance

Liz Susman, Chair; Jaap Denissen; Brett Laursen; Ingrid Schoon and Anne Petersen, ex officio.

This committee will work with the Treasurer to review investments and develop investment policy, and will provide advice on D&O insurance, US non-profit filings (form 990), and financial transactions and institutions. It will also review the budget, as proposed, and recommend actions to the EC.

Membership

Chair, Ann Sanson; Margarita Azmitia; Serdar Degirmencioglu. Astrid Poorthuis, Olga Solomontos-Kountouri, Xinyin Chen (ex officio), Carolina Lisboa, Paul Oburu and Anne Petersen, ex officio.

This committee will work with the Membership Secretary (Xinyin Chen) on membership recruitment strategies, including obtaining better coverage of the lifespan; greater diversity of fields; improved recruitment of human development scholars from outside the US, Canada, and Europe; and more young scholars. This committee will also work with the Membership Secretary to formulate policy recommendations about membership fees for regional members; currently there is a large variation in fee levels which are no longer in alignment with the categories laid down by the World Bank. (See Workshop Committee, below, for overlapping areas.)

Nominations

Chaired by Past President Rainer K. Silbereisen and including the President plus others.

Develops the slate of nominees for elections.

Publications

Andy Collins, Chair; Jesus Palacios, Jacqueline Goodnow, Joan Grusec, Loreto Martinez; ex officio: Marcel vanAken (IJBD), Karina Weichold and Bonnie Barber (Newsletter), Kerry Barner (SAGE), Nadia Sorkhabi (Web Content), and Anne Petersen.

The Publications Committee oversees all ISSBD publications including the IJBD, the Newsletter, and web content. In addition, the PC will recommend to the Executive Committee any changes in policy (including budgets) affecting publications. Finally, the PC will periodically consider whether the ISSBD should be engaging in additional approaches to publication/communication.

Regional Workshops

Suman Verma and Catherine Cooper, Co-Chairs.

The Co-Chairs submitted a preliminary report from a survey of participants in regional workshops. Their ultimate goal is to propose policy about how these workshops are proposed, funded, and implemented. This committee will need to work closely with the Membership Committee and the Membership Secretary; perhaps there should be overlapping membership. In one region, 10% of membership dues are held within the region for the funding of workshops. Others pay their dues directly to the ISSBD and request workshop funds. The Workshop committee should look at these practices and make a recommendation about whether the ISSBD should change practice or continue with its varied practices. Information about workshops should also be put on the website.

Fellowship Awards

Peter Smith, Chair; Catherine Cooper; Serdar Degirmencioglu; Silvia Koller; Philomena Parada; Suman Verma

Peter Smith proposed a new ISSBD Award, now approved by the EC, for up to three Developing Country Fellowships (DCFs). Peter Smith will chair the Fellowship Awards Committee, which will solicit applications for fellowships and recommend new Fellowship Awards to the EC.

Ad Hoc Committees

Subcommittee of EC to Review Proposals for the 2010 Biennial Meeting

Chair: Arnie Sameroff; Margarita Azmitia, Silvia Koller, Jari-Erik Nurmi, Avi Sagi-Schwartz, Marcel van Aken.

This subcommittee reviewed the proposals submitted for the 2010 ISSBD meeting, and made recommendations to the ISSBD Executive Committee.

10.2. Awards

1. Distinguished Scientific Contribution Award

– Avshalom Caspi and Terrie Moffitt as *joint* recipients (Duke University, USA and Institute of Psychiatry, UK)
– Nancy Eisenberg (Arizona State University, USA)

2. Distinguished Contributions to the International Advancement of Research and Theory in Behavioral Development

– Kenneth Rubin (University of Maryland, USA)

3. Distinguished Scientific Award for the Applications of Behavioral Development Theory and Research

– Catherine Cooper (University of California, Santa Cruse, USA)

4. Young Scientist Award

– Geertjan Overbeek (Radboud University, the Netherlands)

10.3. Report from the Publication Committee

The chair of the Publication Committee, Andy W. Collins, reported by telephone as follows: "All signs are that our working relationship with Sage Publications is very good. The IJBD is at a transition point in terms of editorial leadership, thus giving the PC and the Executive Committee an

opportunity to review and, as needed, to re-think its operations and functions. These discussions can build upon the excellent contributions of editors throughout its history, and—in particular—the wise and energetic leadership of the current editor and associate editors. The Newsletter has two excellent new editors who are proposing fresh ideas for that publication."

The report was approved unanimously by the EC.

11. Young scholars report

Young scholar representative Zeno Mello introduced the activities. Awards Committee: Nadine Messerli-Burgi (Swiss National)

Fellowship Committee: Filomena Parada (Portugal)

Finance Committee: Susana Mendive (Chile)

Membership Committee: Olga Solomontos-Kountouri (Cyprus)

Web Content/Communications: Nadia Sorkhabi (Iran-USA)

Goals and Ongoing Projects for Consideration
Young Scholar Representation on Executive Council, Electronic (e.g., list serve) communication, Systematizing Young Scholar Representation selection, Incorporating Young Scholar from biennial meeting location on Conference/Program Committee.

The EC decided to proceed with the proposal that the Society will run elections for a student representative (out of two candidates) who will be nominated by the President.

Initiated Young Scholar Community Meeting (YSCM): The YSCM designed to provide YS with opportunity to express interests, comments, and needs. First YSCM was on July 14, 2008. Young Scholar Representatives will be introduced and involved in discussion.

12. Next meeting of the EC

The next meeting will take place one day before the next SRCD conference in Denver April 1, 2009.

13. Other relevant business

No other topics were raised.

Katariina Salmela-Aro
Secretary

News

News from the *IJBD* Editor

It is with pleasure that I take the opportunity the newsletter editors gave me of informing you about the *International Journal of Behavioral Development*, and the fact that my editorial team has taken over since January 1st, 2008. The new associate editors Jaap Denissen, Nathan Fox, Susie Lamborn, Olivier Pascalis, and Silvia Sörensen, together with editorial assistant Annemiek Karreman, and myself as editor, are very excited to continue the work that William M. Bukowski and his team did with the journal in the years before.

We plan to continue the successful work of the previous team, but we are also making some strategic changes to the journal. For one, we plan to make early decisions on submissions. That is, each new submission is carefully read by the editor or one of the associate editors to decide whether it does have a reasonable chance of getting published. If we think it does not have this chance, we will not send it out for review. We strive to do this within two weeks after submission, so that authors don't have to wait long for a rejection. We also provide feedback on how to improve the manuscript, or what other journal would be more suitable. Our initial experiences with this system have been positive: of course it is never nice to hear that one's manuscript is rejected, but authors seem to be happy with the feedback, and with the quick decision. In addition to this, if a manuscript is sent out for review, we aim to give the authors feedback on their manuscript within three months. One technical hallmark related to the speed of processing and publishing is that *IJBD* will be moving to OnlineFirst (i.e., publishing ahead of print) at the beginning of 2009.

Two other changes that we are going to make, as of the first issue of the 2009 volume, is that we will have a special section on review articles, and a special section on methods and measures articles. We will have at least one or two reviews on topics in behavioural development in each issue, and one or two articles that specifically address methodological issues. For those sections, we have appointed additional editors: William M. Bukowski (the former editor) for the review section and Brett Laursen for the section on methods and measures. Should you have any plans of submitting to these special sections of *IJBD*, feel free to contact me or these editors directly.

One of the features that we would like to continue is the bundling of articles in special issues or sections. Often, but not necessarily, these come out of symposia at a conference, or out of workshops. In volume 32 (2008), we have already seen some fascinating examples of those special sections. The issue on the well-being of children and their families in situations of war and violence (32/4, the July 2008 issue) came out of an ISSBD workshop, and brought an impressive account of studies from around the world. This issue can be seen as exemplary of high quality studies on a very relevant topic, perfectly reflecting the mission of ISSBD. In volume 32(5), the September issue, a more fine-grained comparison of five German studies on individuation during adolescence and emerging adulthood was presented. Volume 32/6, in November 2008, promises extra attention to the issue of subjective age across the life-span, in addition to several articles on bullying and other aspects of children's peer relations. Future special issues concern the challenges faced by immigrant children and families (edited by Susan Chuang, Leon Kuczynski, and Robert Moreno) and social cognitive neuroscience (edited by Nathan Fox and Eveline Crone). Should you have any plans for a similar special issue or section, don't hesitate to contact me at an early stage.

I would like to conclude this information on *IJBD* with a special appeal to you, members of ISSBD, and thus readers of the journal. *IJBD* is thriving, with an increasing number of submissions (up to ca. 200 per year), an increasing impact factor (well over 1.0), and an impressive and also increasing number of full-text downloads (174,689 in 2007!). Here is where you can help, in attracting even more attention to the high-quality articles that we publish. For example, you can refer to *IJBD* articles in your own papers. You can also alert your students or your colleagues to articles in *IJBD* that might be relevant for them. In a sense, you as ISSBD members can function as ambassadors for the journal. Together with our efforts as an editorial team, I am convinced that we can make the journal even better and an even more valuable factor in the field of the studies of behavioral development.

Marcel A.G. van Aken
Editor International Journal of Behavioral Development
E-mail: IJBDeditor@gmail.com

ISSBD Developing Country Fellowships

The ISSBD Executive Committee has approved a proposal to launch three Developing Country Fellowships (DCFs). The aim is to encourage sustainable development of activities congruent with the aims of ISSBD in developing countries, and assist the professional development of early career scholars in such countries. Eligible members of ISSBD are invited to apply for these.

What Does a DCF Provide?

Each DCF will provide:

- free conference attendance at ISSBD (including economy air fare and a subsistence allowance)
- a support grant of $1,500 per annum for the duration of the Fellowship, starting in the September immediately following the ISSBD conference

Why Attendance at the ISSBD Conference?

The selected Fellows will present detailed plans for their work, at the conference they are sponsored to attend. This will be at a dedicated event, at which the three Fellows can meet each other, together with members of the Selection Committee, and ISSBD committee members (and open to others). The presentation should include not only academic plans, but details of what professional support and local and/or national co-operation is available, and how the Fellowship funds can be used productively. The session would allow constructive feedback of plans presented and initiate shared experience amongst the three Fellows.

What are the eligibility criteria for DCFs?

Fellows should be early career researchers (that is, normally within 10 years of their first or higher degree), and must be a member of ISSBD (at least once selected as a Fellow). They should have a post in a host country that is a developing country as defined by ISSBD membership criteria (so entitled to a reduced membership fee), and should normally be a citizen of this host country.

What Will the Selection Panel Look For?

Besides the eligibility criteria, the panel will look at the project that the DCF will support. While academic soundness is one important criterion, also very important are feasibility, and the likely practical benefits of the work. The project should be a potentially sustainable one, with benefits for the holder, the institution, and sections of the country's population, in line with the general aims of ISSBD.

What can the Support Funds be Used for?

The support grant should be used for research related purposes, such as buying equipment, test materials, books, or computing facilities, or for essential travel within the country. While the funds available are limited, it is hoped that the DCF can 'pump prime' activities and possibly applications for further support elsewhere.

Is DCF for a Person or for an Institution?

A bit of both. A DCF is a Fellowship, and it is awarded to a particular person; but his/her project at a particular institution and in a particular context is part of the selection criteria. The intention is to assist in the development of a sustainable and socially useful research project, in a specific area, probably involving other local or national organizations. Thus it will not be possible to transfer a DCF to a different institution, if the holder moves, although it may be possible to transfer it to a new holder in the same institution, if the prospective holder can demonstrate eligibility and the capability of continuing a project that is underway. Any non-consumable items should be considered the property of the project, not the individual, and should stay with the host institution or project unless otherwise agreed.

How Will the Finances be Organised?

A Fellowship is normally for two years, but with the possibility of extension to a total of four years.

Once selected, a Fellow will attend the next ISSBD conference, and (with the other DCFs) present his/her plans. Commencement of the Support Grant funding is conditional on satisfactory plans being presented at this ISSBD conference.

The Support Grant funds will be paid on a yearly basis, in advance, the second year's funding being conditional on a satisfactory progress report. Wherever possible the funds will be paid directly to the Fellow, in his/her preferred currency (with ISSBD covering any currency transaction costs). A record should be kept of all expenditure.

This funding is for two years; but after the first year, a Fellow may apply to have costs covered for the next ISSBD conference, and for continuation of funding for a second two years. Normally, a DCF will not be continued beyond four years.

What Other Support will a DCF Have?

Each DCF will be assigned a Mentor, who will be a member of the DCF selection panel, or some other senior member of ISSBD. S/he will act as first point of contact with the Society, and be available to advise the Fellow in program design and implementation.

Who is on the Selection Panel?

The panel is chaired by Peter K. Smith (Goldsmiths, University of London, U.K.). The other panel members are: Catherine Cooper (USA); Serdar Degirmencioglu (Turkey); Silvia Koller (Brazil); Filomena Parada (Portugal); and Suman Verma (India).

How Do I Apply?

Information, and an application form, will be available on the ISSBD website. They can also be obtained from the chair (p.smith@gold.ac.uk) or other members of the selection panel, who can also be approached for further information or advice.

Applications should be sent to the Chair of the Selection Panel, preferably by email, or by post (Peter K. Smith, Dept. of Psychology, Goldsmiths College, University of London, New Cross, London SE14 6NW, U.K.).

For this first round of DCFs, applications must be received by August 31, 2009. Decisions will be announced by December 2009. Presentations would then be made at the 21st Biennial ISSBD meeting, in Lusaka, Zambia, in July 2010.

Peter K. Smith
University of London, UK
E-mail: p.smith@gold.ac.uk

ISSBD 2010 in Africa

A Continent of Cultural Diversity and Rapid Social Change

The African continent is home to over 900 million people, speaking many hundreds of different languages, and governed in more than 50 nation states. It is widely believed that, in prehistoric times, Africa was the cradle of humankind. The ancient civilizations of Egypt, Abyssinia, Benin, and Zimbabwe (to mention just a few) have left wonderful monuments and a rich field for archaeological research. But contemporary societies display more conspicuous influences from incursions over the last five centuries by Arabic and European cultures. Widely held religious beliefs include those espoused by Christianity, Islam, and endogenous animist religions. And the languages of Arabic, English, French and Portuguese are more widely used for official communication than indigenous languages such as Swahili, Hausa, Kongo or Zulu.

The notorious trans-Atlantic slave trade that scattered millions of Africans across the Americas was followed in the late 19th century by European colonization. The second half of the 20th century saw the expulsion of the colonial powers, notably Britain, France and Portugal, by liberation movements, and the dismantling of the racist apartheid regime in South Africa. The colonial era left a conspicuous legacy of European legal, political and economic systems, languages and educational structures, health services, and urban architecture. Most of the continent has experienced rapid urbanization and somewhat uneven industrialization over the course of the 20th century. Thus a growing proportion of the youth in African societies were born and raised in a city, speak one of the former colonial languages more fluently than their parents and are heavily influenced by the globally disseminated, Western cultural media. Distinctive challenges for research on behavioral development in this region thus include the contextual parameters of cultural diversity and rapid social change, as well as the biological and social parameters of poverty, and of the HIV and AIDS pandemic.

Planning for a Multinational, Multidisciplinary Congress

The University of Zambia (UNZA) Department of Psychology felt greatly honored last year by the encouragement we received from a network of developmental scientists in Cameroon, Botswana, and Uganda to submit a bid to host the 2010 biennial congress of the ISSBD. Within UNZA, we received strong commitments of support from colleagues in the Department of Pediatrics and Child Health in the School of Medicine and in the School of Education's Department of Educational Psychology, Sociology and Special Education. So we proceeded to request and secure approval from the Dean of our School of Humanities and Social Sciences, and the University's Vice-Chancellor, Professor Stephen Simukanga. We were all delighted in February this year to learn that the Executive Committee of ISSBD had adopted our proposal.

We envisage three levels of organization for the congress: a Local Organising Committee (LOC), an African Research Advisory Panel (ARAP), and a global, International Scientific Program Committee (ISPC). Names, photos and profiles of the LOC appear on the congress website: *http://sites.google.com/site/issbd2010lusakazambia*. Four of us attended ISSBD's 20th congress in Wuerzburg, Germany in July this year: Jacqueline Jere-Folotiya, Bestern Kaani, Sidney Mwaba and myself. Thanks to generous advice from President Anne Petersen, Congress Chair Wolfgang Schneider, and his team led by Marie Proeschold and Jutta Wachter, we learned a lot about the challenges of organizing such a big event. We also met with the Executive Committee and held two brainstorming sessions with ISSBD members from around the world about how to make the 2010 congress in Lusaka a success.

The African Research Advisory Panel will comprise convenors of the eight regional workshops held by the ISSBD in Africa since 1992 (in Cameroon, Cote d'Ivoire, Zambia, Namibia, Uganda, South Africa and next year in Kenya) and a few other key informants active in the region. We hope to convene meetings of the Panel at various regional gatherings during 2009. Meanwhile, the International Scientific Program Committee will soon begin its work via email. The membership includes 16 men and 13 women with distinguished records of published research on various aspects of behavioral development, based in 15 countries around the world: Australia, Brazil, Cameroon, Canada, China, Finland, France, Germany, India, Japan, Netherlands, Turkey, UK, USA and Zambia.

In addition to their global distribution, the expertise of this distinguished group of developmental scientists encompasses the periods of early and middle childhood, adolescence, adulthood and old age; genetic, biobehavioral, social, and cultural dimensions; and applications to the fields of education, health and public policy. With their creative collaboration we hope to generate a broad, multidisciplinary program for the 2010 congress with both a global scope and distinctive regional themes.

Explaining the Relevance of Developmental Science

One recurrent theme in our planning discussions so far has been the importance of actively exploring the interface between theory and practice. Psychology and the other developmental sciences are still under-represented in many African universities, and many policymakers on the continent have a rather narrow view of how developmental research could and should inform the design of policies, programs and services addressed to the needs of children, adolescents, parents and the elderly. We hope that the gathering in 2010 of so many scholars committed to the systematic study of behavioral development will capture the attention of those in a position to make use of research findings for the promotion of well-being in each of those constituencies. Suggestions from ISSBD members for how to stimulate and enhance the quality of dialogue at the congress around such issues will be very welcome.

Why Not Tack on a Holiday?

We understand that for many ISSBD members, the congress in Lusaka will be your first opportunity to visit Africa. On the congress website you will find a link to a commercial website (*http://www.zambiatourism.com*) which contains lots

of information about places to visit in Zambia, safari options, activities and adventures, as well as a directory of accommodation, transport and services with links, wildlife and birdlife info, maps and photo galleries. Do check it out. And, of course, remember that Africa contains many other wonderful tourist destinations, such as the pyramids of Egypt, Gore Island in Senegal, the Great Rift Valley in Kenya, and the Cape of Good Hope in South Africa. The Congress is scheduled for the week of 18 - 22 July 2010, more than a week after the date for the FIFA World Cup final match in South Africa. That leaves you time, if you are planning to attend both events, to savor some of Africa's great tourist attractions!

Robert Serpell
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Young Scholars' Corner

Greetings and welcome to the first edition of the Young Scholars' Corner. This section of the Newsletter is intended to communicate information specific to the interests and needs of ISSBD Young Scholars. In this issue, an update is provided on the Young Scholar activities in ISSBD governance and at the biennial meeting. Future issues will address scholarly and professional development matters. Your ideas and comments are welcomed and may be sent to Jochebed G. Gayles who will be authoring future editions at jgg137@psu.edu.

Young Scholar Activities in ISSBD Governance

Young Scholars are of major interest to ISSBD. The Executive Council (EC) is very supportive and enthusiastic about including young scholars. Consistent with this position, President Ann Petersen has established the Young Scholar Representative position on the EC. This appointment is charged with addressing the interests and needs of ISSBD members who consider themselves Young Scholars (i.e., students, post-doctoral fellows, etc.), communicating with the EC and the Young Scholar community, and soliciting participation of Young Scholars in ISSBD governance. Thus far, Young Scholar Representatives have been established to the following committees:

- Awards Committee: Nadine Messerli-Burgi (Switzerland)
- Executive Council: Zena R. Mello (USA)
- Fellowship Committee: Filomena Parada (Portugal)
- Finance Committee: Susana Mendive (Chile)
- Membership Committee: Olga Solomontos-Kountouri (Cyprus)
- Publishing Committee: Jonathan Bruce Santo (Canada)
- Web Content/Communications: Nadia Sorkhabi (Iran-USA)

Importantly, the EC recently approved the permanent addition of a Young Scholar position on the EC. The motion ensures that a Young Scholar will be a formal part of the EC. Representation enables the voice of Young Scholars to be heard by those individuals making decisions within the Society and provides the Young Scholar Representative with the opportunity to contribute to decision making through the voting process. Young Scholars will be elected into the position, beginning with the scheduled election this year.

Young Scholars at the 20th ISSBD Meeting

The Biennial Meeting in Würzburg, Germany was attended by hundreds of Young Scholars who participated in numerous poster and paper presentations. The first ever Young Scholar Community Meeting was held and was quite a success! The event was open to all those who self-identified as Young Scholars with the primary purpose of sharing interests, ideas, and needs. Many important issues were raised including interest in facilitating communication among Young Scholars and generating resources for Young Scholars to attend biennial meetings. Several great ideas for the 2010 meeting were suggested and will be considered, such as a workshop focusing on the publishing process.

ISSBD Young Scholars are a growing community of active scientists and professionals from around the globe. If you are interested in becoming involved or being added to our email list, please contact Zena R. Mello at mello@berkeley.edu.

Zena R. Mello
University of California, Berkeley, USA
E-mail: mello@berkeley.edu

Past-President of ISSBD Rainer K. Silbereisen Elected as President of IUPsyS

Professor Rainer K. Silbereisen, from Jena University, Germany and past president of the International Society for the Study of Behavioural Development (ISSBD), was recently elected president of the International Union of Psychological Science (IUPsyS). The election took place at the IUPsyS General Assembly, held at the 29th International Congress of Psychology, Berlin, in July this year. Rainer Silbereisen will lead IUPsyS from 2008 to 2012, after being a member of the executive committee of the union since 2000. IUPsyS is the umbrella organization of more than 70 national scientific associations of psychology and has "the development, representation and advancement of psychology as a basic and applied science nationally, regionally, and internationally" (Article 5, Statutes) as its overall aim. It also supports the exchange of scientists and young scholars at an international level and seeks to collaborate with other scientific organizations and political bodies in matters of mutual interest, such as UNESCO. As president, Rainer Silbereisen hopes to give new impetus to international collaborations in research on all aspects of behavior, and to the application of scientific psychological knowledge worldwide (for further information see http://www.iupsys.org).

IJBD Call for Papers: Advances in Developmental Methodology

Scholars are invited to submit papers to a new recurring section of the *International Journal of Behavioral Development* devoted to advances in developmental methodology. The Methods and Measures section of the journal will feature articles on issues related to instrumentation, design, and statistical analysis in research on human development. Some papers will be brief primers on cutting edge developmental methodologies. Others will be archival descriptions of procedures and instruments. Still others will be empirical studies that illustrate unique advances in statistics or measurement. Primers on new techniques and procedures are welcome. Manuscripts should be written for an audience of developmental scholars. Submissions must be brief, ranging in length from 15 to 25 manuscript pages, inclusive. Submit manuscripts via the journal submission portal at http://mc.manuscriptcentral.com/ijbd. Manuscripts intended for the Methods and Measures section should be designated as "methodology articles" at the manuscript type prompt. Direct inquiries to section Editor Brett Laursen (laursen@fau.edu) or to Editor-in-Chief Marcel van Aken (m.a.g.vanaken@uu.nl).

MAJOR CONFERENCES AND WORKSHOPS OF INTEREST

2009 April 2–4
Society for Research on Child Development Biennial Meeting (SRCD)
Location: Denver, Colorado, USA
Website: www.srcd.org

2009 July 7–10
11th European Congress of Psychology (ECP)
Location: Oslo, Norway
Website: www.ecp2009.no

2009 August 18–22
European Conference on Developmental Psychology
Location: Vilnius, Lithuania
Website: www.esdp2009.com

2009 November 30–December 2
ISSBD African Regional Workshop: Building African Graduate Students' Capacity in Human Development Research
Location: Kisumu, Kenya
Website: www.issbd.org

2009 July 22–24
ISSBD Workshop: Social and emotional development in societies undergoing change
Location: Nanjing, P. R. China
Website: www.issbd.org

2010 March 11–13
Biennial Meeting of the Society of Research on Adolescence (SRA)
Location: Philadelphia, USA
Website: www.s-r-a.org

2010 May 12–15
XI Biennial Meeting of the European Association for Research on Adolescence (EARA)
Location: Vilnius, Lithuania
Website: www.eara2010.eu

2010 July 18–22
21th Biennial Meeting if the International Society for the Study of Behavioural Development
Location: Lusaka, Zambia
Website: www.issbd.org

Klaus J. Jacobs

ISSBD expresses deep regret over the death of philanthropist Klaus J. Jacobs, founder of the Jacobs Foundation, who died on September 11, 2008. Since its inception, the Jacobs Foundation has been a major funder of ISSBD regional workshops and young scholar travel grants to ISSBD meetings. Mr Jacobs' emphasis on the importance of youth development, particularly in the developing world, inspired many. The world has lost a great man.

Anne C. Petersen, PhD
President, ISSBD