



Children, Media, Methodology

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Why Care? Magnitude and Variety of Exposure

- w Children are being exposed to electronic media for greater amounts of time, with greater varieties of content and form, with more possibilities for active engagement, and with greater intensity than ever before.
- w Media are being designed for ever-younger children. Media use is consequently beginning in infancy. This is a big change.



Negative Impact: A Few of the Claims

w Social Behavior

n Aggression

w Health

n Obesity

w Education

n Interference with reading

w Cognition

n Attention



Are Media Toxic?



- w The all-too typical approach is to treat a medium as if it is a toxic substance and then calculate dose-response relationships.
- w Not surprisingly, in my view, this approach accounts for only very small amounts of variance and relationships are often curvilinear, as in TV-school achievement.
- w The reason: Media content varies widely and may account for most effects.



Positive Impact: A Few of the Claims

w Social behavior

- n Teach and model prosocial alternatives to aggression

w Health

- n Reduce obesity with nutrition and exercise messages

w Education

- n Encourage reading through modeling and teaching

w Cognition

- n Enhance attention skills using the power of the medium



Consider Diet as an Alternative Metaphor

- w If food were considered a toxic substance, a dose-response relationship to health would be curvilinear and would account for only small amounts of variance.
- w If instead, *diet* is measured, a much better understanding of the relationship of food to health is obtained.



Children's Media Diet



- w Types of content are analogous to types of food (one can still eat too much regardless of how nutritious is the food). One can study and debate children's needs for various types and amounts of media content.
- w Cognitive and affective processing of content is analogous to digestive processing of food. The brain is the organ of media digestion.



The Healthy Media Diet?



- w Pursuing the diet analogy, it is likely that there are healthy media diets for children. After all, children need information and education for optimal development, and they may even need entertainment. The evidence is that media can educate and entertain. What do we know about the healthy media diet for children? What kind of balance with non-media activities is needed for healthy development? How should that diet change with age?
- w We need research.
- w We need to involve media companies as much as healthy diets require the involvement of food companies.



Interdisciplinary Research

- w The research on children and media must be every bit as interdisciplinary as (I hope) has been (or should be) the research on nutrition and diet.
- w To name a few: Communication, Economics, Neuroscience, Pediatrics, Psych, Psychiatry, Psychology, Sociology. But many others are relevant.



Many Methodologies



- w Because the problem is large and many-faceted, data-collection and data-analytic methodologies must be employed from the varied disciplines, appropriate to laboratory and field studies, observational and interventional. To some extent, this has been done: surveys, interviews, video observation of behavior, secondary task reaction times, content analysis, daily activity diaries, and others.



But: *Lots* yet to be done.

- w Because so few people have active research programs concerned with children and media, many methodologies remain to be exploited.
- w Example: Eye tracking; available since 1960s. No normative data exist for TV viewing (contrast to reading).
- w Example: Neuroimaging. Few EEG and ERP studies in contrast to many thousands on other topics. First media studies with fMRI have just been published.



Our Methodology Needs are Huge

- w Exposure – we need automated techniques.
- w Content – we need automated techniques and standards for characterizing content.
- w Form – we need both theory and methodology for characterizing and comparing formal features, including nature of user interactions, of media.
- w Detailed analyses of behavior, cognition, affect, and neural processes while using media.
- w Outcomes, both short-term and long-term and theories that connect exposure, content, form, and use of media with outcome. Example: attention.



We Need Commitment

w Over the past 50 years, few researchers have had consistent programs of research on children and media. There are only a few junior investigators who are focused on the issue. The reasons lie in the insularity of academic disciplines, and the lack of sustained sources of research funding. But nevertheless, the media explosion in children's lives is happening, releasing forces with unknown consequences. May this meeting be a step forward in helping us to understand and control those forces?