UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

ENTERTAINMENT SOFTWARE ASSOCIATION; VIDEO SOFTWARE DEALERS ASSOCIATION; AND ILLINOIS RETAIL MERCHANTS ASSOCIATION;	)	No. 05 C 4265
Plaintiffs,	)	Judge Matthew Kennelly
v.	)	Magistrate Judge Denlow
ROD BLAGOJEVICH, in his official capacity as Governor of the State of Illinois; LISA MADIGAN, in her official capacity as Attorney General of the State of Illinois; and RICHARD A. DEVINE, in his official capacity as State's Attorney of Cook County,	)	
Defendants.	)	

DECLARATION OF WILLIAM G. KRONENBERGER, Ph.D.

I, WILLIAM G. KRONENBERGER, declare the following to be true and correct under penalty of perjury:

1. I received my B.S. with a major in psychology, summa cum laude, from Xavier University in Cincinnati, Ohio, in 1986; my M.A. in clinical psychology from Duke University in 1988; and my Ph.D. in clinical psychology from Duke University in 1991. During my training at Duke University, I was a James B. Duke Fellow and Norman Guttman Named Instructor in Psychology. I completed my internship at Indiana University School of Medicine (Indianapolis) in 1991, serving as chief psychology intern during the first half of 1991.

2. I have served on the faculties of the University of Louisville, Department of Psychology as Assistant Professor (1991-1993), University of Louisville School of Medicine, Department of Psychiatry as Adjunct Assistant Professor (1992-1993), Indiana University

(Bloomington), Department of Psychology as Adjunct Assistant Professor (1997-2000), Purdue University (Bloomington), Department of Psychology as Adjunct Associate Professor (1999-present), and Indiana University School of Medicine, Department of Psychiatry (Indianapolis) as Associate Professor (1993 to present).

3. Presently, at Indiana University School of Medicine, I serve as the Director of the Section of Psychology in the Department of Psychiatry, Co-Chief of the ADHD-DBD (Attention-Deficit/Hyperactivity Disorder - Disruptive Behavior Disorder) Specialty Clinic, and Chief of the Psychological Testing Clinic at Riley Hospital for Children. During the period from 1994 to 2001, I served as the Clinical Director of the Child Psychiatry Consultation-Liaison Service at Indiana University School of Medicine and Riley Hospital for Children. I am also the Vice-Chair of Institutional Review Board-01 at Indiana University-Purdue University Indianapolis, which is responsible for evaluating and overseeing the ethical and appropriate conduct of research in the social and behavioral sciences.

4. In my current position as a faculty member at Indiana University School of Medicine, I teach, conduct research, and perform clinical and administrative service. My clinical and research practices are based at the Riley Child and Adolescent Psychiatry Clinic (RCAPC) within Riley Hospital for Children.

5. At RCAPC, I conduct clinical evaluations, perform psychological testing, and direct interventions with children and adolescents who are experiencing difficulties with self-control (executive functioning) of thinking, emotion, and behavioral processes. These children and adolescents often show behavior characterized by inattention, disorganization, hyperactivity, impulsivity, learning problems, explosive behavior, and/or aggression. My research addresses problems in these same areas, investigating the evaluation, causes, and treatment of disorders of

executive functioning and self-control. I teach advanced techniques in testing and treatment to medical students, psychiatry residents, psychology interns, and psychology graduate students.

6. At a regional and national level, I consult and speak on topics pertaining to psychological testing, executive functioning, ADHD, and aggressive-disruptive behavior. I am on the editorial board of two major journals, the Journal of Pediatric Psychology and the Journal of Attention Disorders. My research has been published in major journals including Pediatrics, Journal of Pediatric Psychology, Journal of Clinical Psychology, Journal of Attention Disorders, and Journal of Developmental and Behavioral Pediatrics, and my research has been presented at numerous national and international conferences. I have won a regional service award from my state psychological association for my accomplishments.

7. I have authored a clinical resource text that shows practitioners how to assess and treat childhood mental disorders in an office or hospital setting. This book focuses on the diagnosis, evaluation, testing, and treatment of childhood mental disorders, integrating major advances in theory and research.

8. The following publications and presentations identify studies in which I have been personally involved as the co-principal investigator or co-investigator.

- Effects of media violence in adolescents with disruptive behavior disorder: Emotional Stroop fMRI study, abstract pub'd in *NeuroImage, 26* (supplement 1), S25. (Kalnin, A.J., Wang, Y., Kronenberger, W.G., Mosier, K.M., Li, T.Q., Dunn, D.W., & Mathews, V.P. (2005, June)) Paper presented at the 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Ontario. (Attached hereto as Kronenberger Ex. 1).

- Media violence exposure and executive functioning in aggressive and control adolescents, pub'd in *Journal of Clinical Psychology*, 61, 725-737 (Kronenberger, W.G., Mathews, V.P., Dunn, D.W., Wang, Y., Wood, E.A., Giauque, A.L., Larsen, J.J., Rembusch, M.E., Lowe, M.J., & Li, T. (2005)).

- Media violence exposure in aggressive and control adolescents:

Differences in self- and parent-reported exposure to violence on television and in video games, pub'd in *Aggressive Behavior*, 31, 201-216 (Kronenberger, W.G., Mathews, V.P., Dunn, D.W., Wang, Y., Wood, E.A., Larsen, J.J., Rembusch, M.E., Giauque, A.L., Lurito, J.T., & Lowe, M.J. (2005)).

- Media violence exposure and frontal lobe activation measured by fMRI in aggressive and non-aggressive adolescents, pub'd in *Journal of Computer Assisted Tomography,* 29, 287-292 (Mathews, V.P., Kronenberger, W.G., Wang, Y., Lurito, J.T., Lowe, M.J., & Dunn, D.W. (2005)). (Attached hereto as Kronenberger Ex. 2).

- Effects of violent media exposure by adolescents with Disruptive Behavior Disorder as compared to control subjects: fMRI activation patterns in frontal lobe. Paper presented at the 88th Annual Meeting of the Radiological Society of North America, Chicago, IL. (Radiology, 225, 132) (Wang, Y., Mathews, V.P., Lurito, J.T., Lowe, M.J., Dzemidzic, M., Phillips, M.D., Kronenberger, W., & Dunn, D. (2002, December).

Effects of Violent Media Exposure on Children

9. The effects of media violence exposure on human behavior have been studied for over 40 years. Most early research focused on television and filmed violence, but more recent research has looked at video game violence

10. Scientific analyses and reviews of the existing research on media violence indicate that media violence exposure causes increased aggressive behavior (Anderson & Bushman, 2001; Huesmann, Moise-Titus, Podolski, & Eron, 2003). The effect size of this relationship is approximately the same as that for lead exposure (for low IQ), combat stress (for posttraumatic stress disorder), trait anger (for high blood pressure), and asbestos exposure (for death from laryngeal cancer) (Bushman & Anderson, 2001; Bushman & Huesmann, 2001; Meyer et al., 2001).

11. My research team's published research shows that individuals with high exposure to media violence on television are also likely to be exposed to high levels of violence in video games.

12. Experimental studies of exposure to violent television and video games have

shown short-term increases in aggressive behavior in children and adolescents, while correlational studies suggest a longer-term association between media violence exposure and aggressive behavior in the natural environment. (Anderson & Bushman, 2001; Anderson and Dill, 2000). Specifically, research on the relationship between violent video game play and aggressive behavior has shown that violent video game play is related to later aggressive behavior (Anderson & Dill, 2000; Anderson & Bushman, 2001).

Neurophysiological Basis for Behavior

13. It is widely accepted that activity in certain regions of the brain is associated with certain types of mental processing.

14. Significant neurological and psychological development occurs during childhood and adolescence. These developmental periods are widely recognized by experts as being qualitatively different than the adulthood developmental period. Experiences during childhood and adolescence have a major and lasting impact because of the rapid neurological and psychological development occurring in those phases of life.

15. Psychologically, cognitive processes such as attention, concentration, and reasoning are developed in childhood and adolescence. Behavioral and emotional processes including attitudes, beliefs, and expectations about the environment are also established in childhood and adolescence. Neurologically, gray matter (nerve cell) volume growth in the brain is greatest in utero and decelerates rapidly after the first few years of life. The greatest amount of neurological development for the remainder of childhood and adolescence consists of growth and decline ("pruning") of connections between nerve cells and of growth in the white matter (myelinated axonal tracts and related supportive structures) of the brain. This part of neurological development is greatest in childhood and early adolescence and decelerates rapidly

in late adolescence. White matter volume increases through age 20 years (Moore, 2005). Hence, neurological development through childhood and adolescence is quantitatively and qualitatively different than that during later life.

16. Activation of certain regions in the frontal lobes of the brain is triggered during processes involving impulse control, self-regulation, choice, attention, and concentration.

17. Likewise, reduced activation of certain regions in the frontal lobes has been associated with greater impulsivity, difficulties in concentration, attention, and self-monitoring, and impairments in decision-making.

18. It has been suggested that underactivity of brain inhibitory mechanisms in the prefrontal cortex, coupled with hyperarousal of the amygdala and temporal lobe regions, is responsible for chronic, explosive, and/or severe aggressive behavior.

Studies using neuroimaging and neurocognitive testing

19. Neuroimaging and neurocognitive testing are increasingly used by clinical psychologists, psychiatrists, and neuroradiologists to better understand brain-based biological processes that underlie behavior.

20. Functional neuroimaging technology (which my research team has used in our studies) allows us to investigate the level of activity in certain regions of the brain while an individual is engaged in a specific type of mental process, such as concentrating or decision-making.

21. Functional magnetic resonance imaging (fMRI) is a widely-used and well-accepted functional neuroimaging technique, because it is noninvasive, does not require use of radiation, and gives good resolution of brain areas. fMRI uses magnetic characteristics of blood flow to show levels of activation in different brain regions. Essentially, fMRI captures "snapshots" of brain activity by showing specific areas of the brain that are active and the degree

of activity based on blood flow to the areas. These "snapshots" are then analyzed by a computer that produces a composite picture showing the amount of activity in the brain region being studied. With the aid of fMRI, researchers have access to actual depictions of activity that result from the subject's brain at work

22. Neurocognitive tests are laboratory performance tests that have been shown to reflect activity in certain regions of the brain. Neurocognitive test scores correspond to the effect of brain-based abilities on the subject's actual performance on a behavioral test. Therefore, they reflect the behavioral output of a brain process.

23. Much of the research involving neuroimaging and violent media exposure has been conducted by my research group at Indiana University School of Medicine and by research groups connected with John Murray, Ph.D. Some other research groups have reportedly initiated neuroimaging and violent media studies, but their results have not been disseminated widely in peer-reviewed publications. Dr. Murray has studied brain functioning during actual exposure to filmed violence. His work has found activation of regions in the brain that are typically associated with threat-arousal appraisals and posttraumatic stress (e.g., amygdala and regions of the frontal lobes) when individuals view violent media (Murray, 2001).

24. Individuals with greater amounts of aggressive behavior have been found to have reduced activity in areas of the frontal cortex and increased activity in parts of the amygdala during emotionally provocative tasks (Davidson, Putnam, & Larson, 2000; Filley et al., 2001). Studies specifically with adolescents have shown this same pattern of neural functioning in adolescents with aggressive/violent behavior (Kalnin et al., 2005; Wang et al., 2002a).

25. Studies of individuals exposed to chronic traumatic experiences (including violence) show reduced volume in some frontal and temporal brain regions, including the

hippocampus and amygdala (Carrion et al., 2001; De Bellis et al., 2002) Hyperarousal of the amygdala and hypoarousal of the frontal/cingulate cortex have been shown to be associated with fear states and past trauma exposure (Liberzon & Phan, 2003).

26. To date, my colleagues and I have conducted three phases of research concerning the relationship between adolescent brain functioning and exposure to media violence (both televised and video game violence). All three phases have been conducted with adolescents between ages 13 and 17 years. We have worked with two subgroups of adolescents in each phase: adolescents with no history of behavior problems ("Control") and adolescents with a history of aggressive, disruptive, rule-breaking behavior ("Disruptive Behavior Disorder [DBD]").

27. DBD can be separated into two behavioral disorders. One group is characterized by persistent rule breaking and resistance to the limits of authority. The other consists of significant violations of the basic rights of others and includes such actions as destruction of property, theft, truancy, human or animal cruelty and fire setting. Our research results do not differentiate between these two groups of DBDs.

28. Our studies carefully measure media violence exposure by using a multimethod-multitrait approach, gathering information from different respondents (adolescents and parents) using different methods (retrospective past week self-report diary; past year media exposure estimates). Analyses of these different ways of measuring media violence exposure showed that adolescents' estimates of media violence exposure over the past year correlated moderately with more direct, detailed reports of media violence exposure over the past week. This finding supports the validity of our method of measuring media violence exposure.

Phase I Study

29. Phase I consisted of a study of the relationship between the adolescent's past

media violence exposure and functioning associated with the frontal lobes of the brain. Parts of the frontal lobes of the brain are responsible for decision-making and behavior control, as well as attention and a variety of other cognitive functions.

30. To measure media violence exposure in our research, we used a past-week retrospective diary of specific television watched and video games played, a past-year self-report estimate of total and violent television and video games watched/played, and a past-year parent-report estimate of total and violent television and video games watched/played. The participants and parents completed questionnaires and interviews about media violence exposure, aggressive behavior, attention-concentration, and impulsive behavior. In the laboratory, participants completed tests of attention, concentration, memory, and intelligence.

31. We measured brain functioning with both neuroimaging and neurocognitive testing. Participants completed tasks of attention and concentration (to stimulate frontal lobe functioning) during brain imaging with fMRI, as well as neurocognitive tests of attention and concentration in the laboratory.

32. We found the following results in our Phase I investigation:

- When playing a violent video game in the fMRI scanner, adolescents with a history of DBD showed less activation in parts of the frontal lobes (thought to be potentially responsible for concentration and self-control) compared to Control adolescents (Wang et al., 2002b)

- Adolescents with DBD had greater exposure to total media violence and video game violence, compared to control adolescents (Kronenberger et al., 2005b)

- Adolescents who watched more violent television played more violent video games (Kronenberger et al., 2005b)

- Adolescents with more exposure to violent media performed more poorly on laboratory tests of attention and concentration than adolescents with less media violence exposure (Kronenberger et al., 2005a)

- Adolescents with more exposure to violent media were rated (both self- and parent-report) as showing more inattentive, disorganized, and hyperactive-impulsive behavior in the real-world environment than those with less exposure to violent media (Kronenberger et al., 2005a)

- During concentration tasks used in fMRI, adolescents in the DBD group showed less activation in the anterior cingulate cortex (ACC) and certain regions of the dorsolateral prefrontal cortex (DLPFC) of the brain compared to adolescents in the Control group. The ACC and DLPFC are thought to be associated with concentration, choice, self-regulation, and self-control (Mathews et al., 2005)

- During concentration tasks used in fMRI, Control adolescents with high media violence exposure showed less activation in the ACC and regions of the DLPFC compared to Control adolescents with low media violence exposure. In several ways, the activation pattern of Control adolescents with high media violence exposure resembled that of DBD adolescents (Mathews et al., 2005)

33. Based upon our findings in Phase I, we concluded that increased media violence exposure was linked with reduced levels of brain functions associated with self-control and concentration. Furthermore, adolescents who had high past media violence exposure showed brain functioning that had some similarities to that of adolescents with an actual history of aggressive behavior.

Phase II Study

34. Phase II was designed to study the relationship between the adolescent's past media violence exposure and functioning associated with the frontal lobes and limbic system (an emotion processing system) of the brain. Essentially, Phase II was an expansion into more emotion-processing tasks of brain functioning.

35. For Phase II, we recruited 63 new participants (31 DBD and 32 Control) between the ages of 13 and 17 years.

36. We measured past media violence exposure in the same way as for Phase I, by

requiring participants and their parents to complete questionnaires and interviews about television and video game exposure. We also asked about aggressive behavior, attention-concentration, and impulsive behavior in the real-world environment.

37. In the laboratory, participants then completed a functional magnetic resonance imaging (fMRI) scan while doing emotion-related tasks that stimulated frontal lobe functioning and limbic system functioning. Unlike Phase I, our neuroimaging protocol involved emotionally provocative tasks during fMRI. We were interested in looking not only at frontal lobe functioning but also at the functioning of some parts of the brain responsible for threat-emotion processing, such as the amygdala.

38. We found the following results in the Phase II investigation:

- Within the DBD group, adolescents with high media violence exposure were slower to respond to violent words (compared to nonviolent words) when asked to ignore the word meaning and respond only to the color of the ink in which the word was printed. Therefore, they were more affected by the violent words than the nonviolent words despite being told to ignore word meaning. This effect (called the "Emotional Stroop Interference Effect") reflects a sensitivity of a clinical subgroup (in this case, adolescents with both DBD and high media violence exposure) to the emotional valence (in this case, violence) of a word (Kalnin et al., 2005). This finding supported our belief that this task was emotionally provocative and related to aggressive thought processing.

- Compared to Control adolescents, adolescents with DBD showed more activation in the parahippocampal gyrus and amygdala regions of the brain when completing emotionally provocative tasks in the MRI scanner. These regions are thought to be involved in processing threat-arousal stimuli (Kalnin et al., 2005)

- Adolescents with high media violence exposure showed more activation in the parahippocampal gyrus and amygdala regions of the brain during the emotionally provocative tasks (Kalnin et al., 2005)

- Poorer parent-adolescent agreement about the adolescent's media violence exposure was associated with greater aggressive-disruptive

behavior in the adolescent (Kronenberger et al., 2004; using combined Phase I and II data)

39. Based upon our findings in Phase II, we concluded that increased media violence exposure was linked to increased activation of brain regions associated with threat arousal but with decreased levels of brain functions associated with self-control and concentration. We also found that adolescents were less aggressive when their parents were more aware of their media violence exposure (when parents and adolescents agreed about the adolescent's media violence exposure).

Phase III Study

40. Phase III Study. Phase III is an experimental study in which half of the participants are randomly assigned to play a violent video game and half of the participants are randomly assigned to play a nonviolent but exciting video game. Participants receive an fMRI immediately after the video game play, in order to investigate whether the video game play had an effect on their brain functioning. We are using both attention/concentration (from Phase I) and emotionally provocative (from Phase II) tasks. Phase III is currently in progress, and as of our most recent analysis meeting in late August, we did not have sufficient data for a pilot analysis.

Results of Studies in Phase I and II

41. In Phase I and II, we found positive correlations between televised and video game media violence exposure rated by the same individual for the same duration. This finding shows that subjects who watched violent television were more likely to play violent video games.

42. Our study results support prior findings of an association between media violence exposure and serious aggressive behavior, suggesting that both video game and television media violence exposure are independently related to aggression in adolescents

43. In summary, the research results from Phase I and II demonstrated that:

- adolescents with histories of aggressive-disruptive behavior were exposed to more media violence (television and video games) during the past year

- adolescents with high exposure to violent media showed reduced activity in certain regions of the frontal lobes of the brain such as the dorsolateral prefrontal cortex (DLPFC) and anterior cingulate cortex (ACC) during tasks that required them to pay attention and concentrate

- adolescents with high exposure to violent media showed a pattern of frontal lobe functioning that had some similarities to that of DBD adolescents (reduced activity in DLPFC and ACC regions)

- adolescents with low exposure to violent media showed a pattern of frontal lobe functioning that was different than that of DBD adolescents (greater activity in DLPFC and ACC regions)

- adolescents with more exposure to violent media were rated by themselves and by their parents as showing more inattentive, disorganized, and hyperactive-impulsive behavior than those with less exposure to violent media

- adolescents with more exposure to violent media scored more poorly on neurocognitive tests of attention and concentration than those with less exposure to violent media

- the relationship between media violence exposure and self-control (including attention/concentration) weaknesses was not due to age, gender, race, IQ, total media exposure, presence of an ADHD diagnosis, or history of aggressive behavior

- increased media violence exposure was related to increased levels of activity in the parahippocampal gyrus and amygdala regions of the brain, which are involved in an individual's emotional arousal and the processing of threat-arousal stimuli

- the Phase I finding that increased media violence exposure was related to reduced levels of activity in the DLPFC and ACC was replicated in Phase II, indicating that our Phase I results were not due to some unique characteristic of the Phase I sample and that the results apply broadly to the adolescent population

44. The findings from Phase I and II studies are consistent with the conclusion of the Illinois General Assembly (as set forth in the Legislative Findings of the Violent Video Games Law) that "minors who play violent video games[1] are more likely to . . . [e]xperience a reduction of activity in the frontal lobes of the brain which is responsible for controlling behavior."

45. My opinions stated herein regarding the relationship between violent media exposure (including violent video game play) and brain functioning are based on a reasonable degree of psychological/scientific certainty.

46. Key publications in the research literature used in preparing this document are the following:

- Anderson, C.A., & Bushman, B.J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. Psychological Science, 12, 353-359.
- Anderson, C.A., & Dill, K.E. (2000). Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. Journal of Personality and Social Psychology, 78, 772-790.
- Bushman, B.J., & Anderson, C.A. (2001). Media violence and the American public: Scientific facts versus media misinformation. American Psychologist, 56, 477-489.
- Bushman, B.J., & Huesmann, L.R. (2001). Effects of televised violence on aggression. In D. Singer & J. Singer (Eds.), Handbook of children and the media (pp. 223-254). Thousand Oaks, CA: Sage Publications.
- Carrion, V.G., Weems, C.F., Eliez, S., Patwardhan, A., Brown, W., Ray, R.D., & Reiss, A.L. (2001). Attenuation of frontal asymmetry in pediatric posttraumatic stress disorder. Biological Psychiatry, 50, 943-951.
- Davidson, R.J., Putnam, K.M., & Larson, C.L. (2000). Dysfunction in the neural circuitry of emotion regulation - A possible prelude to violence. Science, 289, 591-594.

[1] Violent video games are defined under the statute to "include depictions of or simulations of human-on-human violence in which the player kills or otherwise causes serious physical harm to another human. 'Serious physical harm' includes depictions of death, dismemberment, amputation, decapitation, maiming, disfigurement, mutilation of body parts, or rape." This definition does not change the scope or substance of the opinions and conclusions stated in my report.

- De Bellis, M.D., Keshavan, M.S., Shifflett, H., Iyengar, S., Beers, S.R., Hall, J., & Moritz, G. (2002). Brain structures in pediatric maltreatment-related posttraumatic stress disorder: A sociodemographically matched study. Biological Psychiatry, 52, 1066-1078.

- Filley, C.M., Price, B.H., Nell, V., Antoinette, T., Morgan, A.S., Bresnahan, J.F., Pincus, J.H., Gelbort, M.M., Weissberg, M., & Kelly, J.P. (2001). Toward an understanding of violence: Neurobehavioral aspects of unwarranted physical aggression: Aspen Neurobehavioral Conference Consensus Statement. Neuropsychiatry, Neuropsychology, and Behavioral Neurology, 14, 1-14.

- Frackowiak, R.S.J., Friston, K.J., Frith, C.D., Dolan, R.J., & Mazziotta, J.C. (1997). Human brain function. New York: Academic Press.

- Huesmann, L.R., Moise-Titus, J., Podolski, C.L., & Eron, L.D. (2003). Longitudinal relations between children's exposure to TV violence and their aggressive and violent behavior in young adulthood: 1977-1992. Developmental Psychology, 39, 201-221.

- Kronenberger, W.G., Mathews, V.P., Dunn, D.W., Wang, Y., Wood, E.A., Giauque, A.L., Larsen, J.J., Rembusch, M.E., Lowe, M.J., & Li, T. (2005a). Media violence exposure and executive functioning in aggressive and control adolescents. Journal of Clinical Psychology, 61, 725-737.

- Kronenberger, W.G., Mathews, V.P., Dunn, D.W., Wang, Y., Wood, E.A., Larsen, J.J., Rembusch, M.E., Giauque, A.L., Lurito, J.T., & Lowe, M.J. (2005b). Media violence exposure in aggressive and control adolescents: Differences in self- and parent-reported exposure to violence on television and in video games. Aggressive Behavior, 31, 201-216.

- Kronenberger, W.G., Mathews, V.P., Dunn, D.W., Wang, Y., Wood, E.A., Giauque, A.L., Rembusch, M.E., Larsen, J.J., Kalnin, A.J., & Li, T. (2004, July). Adolescent aggressive behavior and parent awareness of media violence exposure. Poster presented at the 2004 Conference of the American Psychological Association, Honolulu, HI. (Abstracted in The Indiana Psychologist, January 2005, 7).

- Kalnin, A.J., Wang, Y., Kronenberger, W.G., Mosier, K.M., Li, T.Q., Dunn, D.W., & Mathews, V.P. (2005, June). Effects of media violence in adolescents with disruptive behavior disorder: Emotional Stroop fMRI study. Paper presented at the 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Ontario (NeuroImage, 26 (supplement 1), S25).

- Liberzon, I., & Phan, K.L. (2003). Brain-imaging studies of posttraumatic stress disorder. CNS Spectrums, 8, 641-650.

- Mathews, V.P., Kronenberger, W.G., Wang, Y., Lurito, J.T., Lowe, M.J., & Dunn, D.W. (2005). Media violence exposure and frontal lobe activation measured by fMRI in aggressive and non-aggressive adolescents. Journal of Computer Assisted Tomography, 29, 287-292.

- Meyer, G.J., Finn, S.E., Eyde, L.D., Kay, G.G., Moreland, K.L., Dies, R.R., Eisman, E.J., Kubisyn, T.W., & Read, G.M. (2001). Psychological testing and psychological assessment: A review of evidence and issues. American Psychologist, 56, 128-165.

- Moore, B.D. (2005). Neurocognitive outcomes in survivors of childhood cancer. Journal of Pediatric Psychology, 30, 51-63.

- Murray, J.P. (2001). TV violence and brainmapping in children. Psychiatric Times, 18, 1-8.

- Wang, Y., Mathews, V.P., Lurito, J.T., Lowe, M.J., Dzemidzic, M., Phillips, M.D., Kronenberger, W., & Dunn, D. (2002a, May). fMRI frontal lobe activation patterns differ between adolescents with Disruptive Behavior Disorder and control subjects. Paper presented at the 10th Scientific Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM), Honolulu, HI. (Proceedings of the International Society for Magnetic Resonance in Medicine 10th Scientific Meeting, p. 128).

- Wang, Y., Mathews, V.P., Lurito, J.T., Lowe, M.J., Dzemidzic, M., Phillips, M.D., Kronenberger, W., & Dunn, D. (2002b, December). Effects of violent media exposure by adolescents with Disruptive Behavior Disorder as compared to control subjects: fMRI activation patterns in frontal lobe. Paper presented at the 88th Annual Meeting of the Radiological Society of North America, Chicago, IL. (Radiology, 225, 132)

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this ___th day of October, 2005.

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William G. Kronenberger