Please note: this hand-out is intended as a supplement to the presentation, not as a substitute for the presentation. It is intended to assist those who attend my presentations in Sudbury, Ottawa, London, and Toronto Ontario in September and October 2014, to spare them the distraction of taking excessive notes. This handout is NOT intended to be read separately from the presentation; it cannot “stand alone.” If you would like to get a sense of the presentation but did not have the opportunity to attend, please read my second book Boys Adrift especially chapters 2, 3, 4, and 8. You can reach me at mruced@verizon.net but please also send a copy to my personal email leonardsax@gmail.com.

Which of the following, measured when a child is 11 years of age, is the best predictor of happiness and overall life satisfaction roughly 20 years later, when that child has become an adult 31 or 32 years old?

A) IQ  
B) Grade point average  
C) Self-control  
D) Openness to new ideas  
E) Friendliness

Sex differences in risk-taking (see Why Gender Matters, chapter 3, for further discussion)

- Many boys underestimate physical risk; many girls underestimate themselves  
- Who dies in drowning accidents? (Howland and colleagues, 1996)  
- Are these differences socially constructed?  
- Lessons from research with other primates, e.g. Fedigan and Zohar 1997  
- Violent offending

Sex differences in alcohol & drug use (Why Gender Matters, ch. 7, and Girls on the Edge, ch. 3)

- Girls and boys have different motivations for using drugs, alcohol, and cigarettes  
- Girls are more likely than boys to use anxiolytic agents (e.g. Xanax, Ativan, Valium)  
- Boys are more likely than girls to use cocaine and methamphetamine

“This is your brain / this is your brain on drugs” will RECRUIT risk-taking boys to use drugs. Boys don’t reach full maturity in brain development until 30 years of age; the 15-year-old boy is not an adult.
Canadian girls are more likely than Canadian boys to abuse prescription pain pills and anxiolytic agents such as Xanax and Ativan.

Boys want to become Men.
Girls want to become Women.
But what does that mean today? Who knows?

Navajo: Kinaaldá
Orthodox Judaism: not only Bar Mitzvah, but every religious holiday. . .

Every enduring culture is characterized by strong bonds across generations.

“Boys Adrift”: why are so many boys now disengaged from achievement, both in school and in the workplace?
The five factors which (I believe) are driving this phenomenon:
  1) Changes in education over the past 30 years
  2) Video games
  3) Stimulant medications for ADHD
  4) Endocrine disruptors (DEHP, BPA, PET)
  5) “The revenge of the forsaken gods”

Fifth factor: revenge of the forsaken gods
I.e. no transition from boyhood to manhood.

UCLA study: the new cult of fame

John Mayer: “I am the new generation of . . .”
The full text of John Mayer’s interview with Playboy is available (without any photos) at this link: http://iamdomo.com/2010/02/10/what-did-john-mayer-say-read-full-playboy-article-here/.

Why should anybody care about gender issues in child and adolescent development? OK, so girls are now doing better than boys in school, on average; but why should anybody care? Nobody was alarmed 40 years ago when the statistics were pointing in the other direction. One answer to the question comes from Marc Frenette, Klarka Zeman, Statistics Canada.

The answer: Frenette and Zeman: “Educational Assortative Mating”

Males account for 43% of those enrolled at university; but among graduates, only 39%.
Enrolled: http://www40.statcan.gc.ca/l01/cst01/educ53c-eng.htm
Graduates: http://www40.statcan.gc.ca/l01/cst01/educ51a-eng.htm

See also Nicole Fortin, Philip Oreopoulos and Shelley Phipps, “Leaving Boys Behind: gender disparities in high academic achievement”, August 2013, with data from across Canada. At 8th grade, the gender gap in expectations is already robust. http://faculty.arts.ubc.ca/nfortin/LeavingBoysBehind.pdf After adjusting for grade inflation, Canadian boys today are actually doing worse compared with Canadian boys 30 years ago.

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>68</td>
<td>32</td>
</tr>
<tr>
<td>1981</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>1991</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>2001</td>
<td>42</td>
<td>58</td>
</tr>
<tr>
<td>2006</td>
<td>40</td>
<td>80</td>
</tr>
</tbody>
</table>

Source: Census of population, Statistics Canada

![Chart 5.7 Changes over time in reading by gender](image)
The report with the 2013 data was just released October 7 2014:  

The fastest-growing segment of the population is not the cohabiting heterosexual couple, but young adults never married living alone.

Hanna Rosin, *The Atlantic*, “The End of Men”. The Sperminator was controversial 30 years ago, because feminists feared that couples would choose boys over girls. Today, North American parents greatly prefer girls rather than boys.


The full text of the HEPI report authored by Bahram Bekhradnia and John Thompson, titled “Male and female participation and progression in higher education” is available online at no charge at http://www.hepi.ac.uk/466-1409/Male-and-female-participation-and-progression-in-Higher-Education.html.

Sam Cooke, #1 hit song, “Don’t know much about history . . .Now I don’t claim to be an ‘A’ student / but I’m trying to be / cause maybe by being an ‘A’ student baby / I could win your love for me.”

Kids today are not going growing up in the culture of Sam Cooke / John Lennon / Paul McCartney / Simon & Garfunkel. They are growing up in the culture of Akon, Eminem, Simon Cowell and Justin Bieber.

A lesson from St. Andrew’s, in Aurora Ontario: in-bounds v. out-of-bounds  
Why not a snowball tournament?

The disengagement of boys from academic achievement is evident at Grade 2. Doug Trimble’s story from Stirling Elementary in the Hamilton-Wentworth public board (Ontario).

It’s not that boys’ CAN’T. It’s that they DON’T WANT TO.  
You can make the school more friendly to boys without making it unfriendly to girls.

Again: The five factors which (I believe) are driving this phenomenon:

1) Changes in education over the past 30 years
2) Video games
3) Stimulant medications for ADHD
4) Endocrine disruptors (DEHP, BPA, PET)
5) “The revenge of the forsaken gods”
That first factor, **Changes in Education**, has four components:

A) Schools becoming “unfriendly to boys”. Not allowed to throw snowballs!

B) Abolition of competitive formats with well-defined winners and losers

C) Shift away from experiential to didactic learning; from outdoors to indoors

D) Acceleration of the early elementary curriculum


From page 82 of that report:

The medicalization of misbehaviour. Let’s talk about Oppositional-Defiant Disorder. What’s the difference between saying “**Your son is a BRAT**” and saying “**Your son may meet DSM criteria for Oppositional Defiant Disorder, 313.81**”? Both statements may describe the same behavior. But there’s a big difference. “Your son is a BRAT” puts the burden of responsibility on the parents. “Your son may meet DSM criteria...” shifts the burden to the system. Parents, especially less-educated parents, may feel incompetent and step back. Your job is to bring the parent into the therapeutic alliance. “Nobody knows your son better than you do.”

Longitudinal studies:

Roberts et al. 2007 = Brent W. Roberts and colleagues, “The Power of Personality: The Comparative Validity of Personality Traits, Socioeconomic Status, and Cognitive Ability for Predicting...


The two graphs below come from Moffitt et al. 2011:

Dr. James Heckman, Nobel Laureate in Economics, University of Chicago: character skills matter more. See Dr. Heckman’s essay, “Lacking character, American education fails the test,” full text online at http://www.heckmanequation.org/sites/default/files/F_Non-cognitive%20skills_V3.pdf.

**Teaching self-control should be the top priority. Character matters as much or more than academic achievement.**


For a survey of interventions to boost self-control in young children, see the review by Alex Piquero and colleagues, “Self-control interventions for children under age 10 for
improving self-control and delinquency and problem behaviors,” *Campbell Systematic Reviews*, 2010, #2 (117 pages). Piquero and colleagues accept Michael Gottfredson and Travis Hirschi’s assertion that interventions to boost self-control are not effective for children over 10 to 12 years of age. I don’t accept that assertion. Gottfredson and Hirschi are basing their assessment on their experience (pre-1990) with teenage juvenile delinquents. I concede that there is evidence that the criminal justice system is not effective in boosting self-control in incarcerated teenagers: see for example Ojmarrh Mitchell and Doris Mackenzie, “The stability and resiliency of self-control in a sample of incarcerated offenders,” *Crime and Delinquency*, volume 52, pp. 432 – 449, 2006. But data based on incarcerated juvenile offenders in the United States may not be valid for professionals working with Canadians who are living in the community. More to the point: I have personally seen numerous cases in my own practice where kids over age 10 have reformed and become more Conscientious because parents implemented some of the strategies we have discussed. Even very simple interventions, such as repeatedly telling a child to Stop and Think! before you act, can have profound and lasting beneficial consequences, even in kids who have been diagnosed with ADHD: see for example Molly Reid and John Borkowski, “Causal attributions of hyperactive children: implications for teaching strategies and self-control,” *Journal of Educational Psychology*, volume 79, pp. 296 – 307, 1987.

The more general premises here are that personality can change at any age and that increased Conscientiousness is beneficial. For evidence supporting these premises, see the study by Christopher Boyce and colleagues, “Is personality fixed? Personality changes as much as ‘variable’ economic factors and more strongly predicts changes to life satisfaction,” *Social Indicators Research*, volume 111, pp. 287 – 305, 2013; and also Christopher Magee and colleagues, “Personality trait change and life satisfaction in adults: the roles of age and hedonic balance,” *Personality and Individual Differences*, volume 55, pp. 694 – 698, 2013. Magee and colleagues find, not surprisingly, that the older you are, the less likely your personality is to change. I am not asserting that it is easy for a 65-year-old to become more Conscientious. But I have seen 15-year-olds who have become more Conscientious.
Sex differences in the presentation of ADHD: (Sax, 2004; Rucklidge, 2010; Dupuy, Clark & Barry, 2013)
- Boys: predominantly hyperactive, onset before age 7
- Girls and women: predominantly inattentive, onset after age 10

Is ADHD in females the same disorder as ADHD in males? Possibly not.
EEG differences below left; skin conductance below right. Same color-code applies to both figures. These figures demonstrate a **double dissociation of substrates**.

The five criteria for ADHD – in DSM-IV and retained (with changes) in DSM-5:
1) Inattention and/or hyperactivity – this is the LEAST helpful in distinguishing whether this kid truly has ADHD or some other reason for inattention
2) Age of onset (before age 7 in DSM-IV, before age 12 in DSM-5)
3) Multiple settings
4) Significant impairment (this criterion is changed to “impairment” in DSM-5)
5) Symptoms not due to another disorder

Other conditions which can mimic ADHD include depression; childhood anxiety (which presents quite differently from adult anxiety, especially in boys); adjustment disorder; sequelae of child abuse or neglect; giftedness.

**Lack of motivation.** How to distinguish a cognitive deficit from a deficit of motivation?
Ask: **What is your favorite SUBJECT at school?** Not “what is your favorite thing to do at school” but “What is your favorite SUBJECT?” If the answer is “lunch” or “recess”, then this kid’s problem may be motivational, not cognitive. Disliking school is a problem,
certainly, but it is not a psychiatric diagnosis. Sometimes the problem is with the school, not with the child: see chapter 2 of Boys Adrit and chapter 5 of Girls on the Edge.

Of the five required criteria for ADHD in DSM-5, the two which are most important in the differential diagnosis are **onset before 12 years of age** and **no other explanation** for the deficit of attention. If a student was doing well at school in elementary school and middle school but then begins complaining of difficulties concentrating or focusing at high school, ADHD should NOT be diagnosed. You must explore other explanations, such as anxiety, depression, sleep disturbance, etc. etc.

Sleep deprivation can mimic ADHD of the inattentive variety. The Conners Scale and similar instruments cannot tell you WHY this kid is not paying attention, only that they are not paying attention. You must determine whether the girl or boy is sleep-deprived. No devices in the bedroom! The Conners Scales are very useful as a tool for assessing the effectiveness of your intervention over time. They are NOT useful in the diagnostic process, except as a blunt screening tool. When used as a screening tool, the Conners Scales have high sensitivity but low specificity.

The youngest child in the class is 60% more likely to be diagnosed with ADHD in kindergarten, and 100% more likely (i.e. twice as likely) to be diagnosed with ADHD in 8th grade (Elder, 2010)

How come? Kids form attitudes toward school early. And those attitudes, once formed, are global, stable, and non-contingent (e.g. Valeski and Stipek, 2001).

If medication is necessary, Wellbutrin (bupropion) and/or Strattera (atomoxetine) and/or Intuniv (guanfacine) may be safer choices for many kids rather than the prescription stimulants (Adderall, Vyvanse, Concerta, Metadate, Focalin, Daytrana, Ritalin etc.). If the response to non-stimulants is good but not great, you may add a low dose of e.g. Adderall.

**Basic idea: 40mg Strattera + 5mg Adderall is roughly as efficacious as 30mg Adderall, with lower risk.**

If you offer a drug holiday from Schedule II stimulants, be sure to taper, just as you would taper a patient off steroids. If you are prescribing a stimulant along with a non-stimulant, I suggest recommending that the stimulant be taken only on school days; the non-stimulant must be taken every day. By using a lower dose of the stimulant and also skipping the stimulant on weekends and holidays and vacations, you minimize the development of long-term tolerance.
No devices in the bedroom! – i.e. no UNSUPERVISED Internet access. The latest guidelines from the American Academy of Pediatrics – which insist on no devices in the bedroom – are available online at no charge at http://pediatrics.aappublications.org/content/early/2013/10/24/peds.2013-2656.full.pdf.

How to talk to doctors:
- Don’t use the word “client.” Use the client’s name instead.
- Use the word “doctor” as much as possible. “Doctor, as you know. . .”
- Mention the name of another physician. “Dr. Leonard Sax, a practicing physician, shared his contact information with me and said he would be glad to talk with you. . .”

I have referred to the five “required” criteria. Unfortunately, DSM-5 introduces a new diagnostic category: ADHD, Unspecified. “Unspecified” ADHD can be diagnosed in cases where “full criteria are not met”. The clinician need NOT specify how many of the criteria are not met. You could fail to satisfy ALL FIVE criteria and still be diagnosed with “ADHD, Unspecified.” As Wayne Kondro observed, “simply being alive” now suffices for the diagnosis of “ADHD, Unspecified.”

See my article for the Wall Street Journal, June 27 2013, “‘Unspecified Mental Disorder’? That’s Crazy”, online at http://on.wsj.com/1epTGlM. If you are not a subscriber to the WSJ, you can read the full text at http://www.leonardsax.com/wsj.htm (all lower-case, case-sensitive).


Here is the FULL TEXT of the criteria for ADHD Unspecified, p. 66 of DSM-5 (emphasis added):

*This category applies to presentations in which symptoms characteristic of attention deficit / hyperactivity disorder that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for attention-deficit / hyperactivity disorder or any of the disorders in the neurodevelopmental disorders diagnostic class. The unspecified attention-deficit / hyperactivity disorder category is used in situations in which the clinician chooses not to specify the reason that the criteria are not met for attention-deficit / hyperactivity disorder or for a specific neurodevelopmental disorder, and includes presentations in which there is insufficient information to make a more specific diagnosis.*
The dangers of “an empirical trial of medication” a.k.a. “Let’s try it and see if it works”

- “An empirical trial of medication” – may be misleading in this context: stimulants such as Adderall, Concerta, Metadate, Vyvanse etc. appear to help normal kids at least as much as they help kids with severe ADHD
- Gabrieli et al. gave Adderall to normal kids and withheld medication from kids with severe ADHD
- Amphetamine and methylphenidate appear to damage the nucleus accumbens in the developing brain (e.g. Carlezon et al. 2004; Diaz-Heijtz et al.; Gramage et al. 2013; Li and Kauer; Pardey et al. 2012, etc.); list of 14 relevant scholarly citations is online at http://www.leonardsax.com/stimulants.html.
- Dr. Joseph Biederman at Harvard; Fred Goodwin, former chief at NIMH; Charles Nemeroff, chief at Emory; all acknowledged accepting >$1,000,000 from drug companies which they did not publicly disclose. They were functioning as paid spokespersons for the pharmaceutical industry. http://nydn.us/13co0zX

Video games:

Playing video games has little effect on academic achievement below a threshold of 6 hours per week. Beyond that threshold, there is a negative and roughly linear effect.

“Displacement.”

Video games tend to shift motivation away from the real world, to the virtual world. In a large, prospective, longitudinal cohort study, Professors Craig Anderson and Doug Gentile found that boys playing violent M-rated games – particularly games which deployed a moral inversion – exhibited changes in personality over a period of 3 or more years. They become more selfish, more hostile, and less patient.


The middle-class script:

- Work hard in school so you can get into a good college
- Work hard in college so you can get a good job
- Get a good job = have a good life

Students who are A) from low-income households and B) do not have any family member who has ever graduated from college – may hear this script differently. For students who meet both criteria (A) and (B), other approaches may be more effective.
Teams and gangs (Bloods, Crips, MS-13 etc.) share many characteristics:

- Loyalty/permanency: once a Blood, always a Blood
- Colors
- Hierarchy
- Territory

The differences between teams and gangs are in their leadership; in their goals and objectives; and in their tactics.

**Sex differences in communication / sex differences in motivational strategies**

- Deborah Tannen: girls are face-to-face, boys are shoulder-to-shouler
- Attachment: Dr. Gordon Neufeld, Vancouver

Why do boys join gangs?

- Judge John Romero, Albuquerque
- It’s not rational
- They want to prove themselves as men
- They want to seem heroic
- . . .in their own eyes

**Effective interventions:**

- Strengthen bonds across generations, boys with men – and not just any men, but . . .
- The adult men must explicitly teach: “this is what it means . . .”
- Define in-bounds and out-of-bounds: a place to throw snowballs
- Accommodate boys’ need to feel heroic (e.g. comment by Judge John Romero, Albuquerque)

Example: The Peel Aboriginal Network, www.peelaboriginalnetwork.org,

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**Why Gender Matters, Boys Adrift, and Girls on the Edge:**

**Why Gender Matters** “. . . is a lucid guide to male and female brain differences.”
New York Times

**Boys Adrift** “. . . is powerfully and persuasively presented. . . Excellent and informative references and information are provided.”
**Journal of the American Medical Association**

**Boys Adrift:** “A must-read for any parent of boys. This is real science, and Dr. Sax thoroughly uncovers the important health issues that parents of boys need to be tuned into.” Dr. Mehmet Oz, host of “The Dr. Oz Show”

**Boys Adrift:** “I know someone who knows what to do [about bullying]. His name is Dr. Leonard Sax. . . [Boys Adrift] is informative and eminently readable. . . I strongly recommend that you read Boys Adrift.”

Fr. Robert Barron, video at “Word on Fire”, similar comment at wordonfire.org

**Girls on the Edge:** “Packed with advice and concrete suggestions for parents, Girls on the Edge is a treasure trove of rarely-seen research on girls, offering families guidance on some of the most pressing issues facing girls today. Dr Sax’s commitment to girls’ success comes through on every page.”

Rachel Simmons, author of Odd Girl Out

**Girls on the Edge:** “This is essential reading for parents and teachers, and one of the most thought-provoking books on teen development available.”

Library Journal

**Girls on the Edge:** “The best book about the current state of girls and young women in America . . . offers astonishing and troubling new insight . . .”

The Atlantic

Sources, and additional reading:


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