LETTER TO THE EDITOR



Pornographic Socialization as "Selective-Exposure": Let it Go, Let it Go II

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"Let it go, let it go
Can't hold it back anymore
Let it go, let it go
Turn away and slam the door"
(Elsa – Disney's *Frozen*)

In another Letter in this issue, I wrote a brief exposé on the many perils of the current approach to third-variables in pornography effects research (Wright, 2021). I hope readers of this Letter will read its precursor, but its thesis is that pornography researchers should treat third-variables as predictors (i.e., factors that differentiate the frequency and type of pornography consumed), mediators (i.e., mechanisms carrying the effects of pornography), or moderators (elements of people and contexts that either inhibit or facilitate the effects of pornography), not as "confounds" extraneous to and contaminant of the effects of pornography on beliefs, attitudes, and behaviors. About a decade late to the Frozen party, having had my daughter only recently at an age rivaling Abraham, I quoted Elsa in asking my colleagues to "Let go" of the "potential confound" paradigm and move into a "predictors, processes, and contingencies" paradigm. As I noted, this exhortation was a few years in the making and I felt relieved to have finally, formally, articulated it.

In the following days, however, a sense of "unfinished business" was increasingly palpable. I knew there was another lingering message in need of expression. Turning to *Frozen II* now for inspiration (as my daughter has moved on to Elsa and Anna's next adventure), I quote Anna and encourage my colleagues to see the folly of her words as they are currently applied to the "selective-exposure as alternative explanation" convention in cross-sectional pornography effects research.

Problematic Current Approach

"Some things are always true; Some things never change" (Anna – Disney's *Frozen II*)

As any reader even casually familiar with the discussion sections of pornography effects papers utilizing cross-sectional data knows, it is a virtual guarantee that the authors will caution that any association they found between pornography use (X) and the belief, attitude, or behavior under study (Y) may be due to "selective-exposure" (i.e., people already in possession of the belief, attitude, or behavioral pattern gravitating to sexual media content that depicts it) not sexual socialization (i.e., people being influenced by the sexual media content in the direction of the belief, attitude, or behavior). In other words, the authors will adopt the stance that despite the pages of conceptual and theoretical arguments they devoted to justifying a $X \rightarrow Y$ dynamic in their literature review section, it is just as likely the case that $Y \rightarrow X$. The author will then call for "longitudinal research" to "untangle" the directionality of the relationship. A review of discussion sections from years and years ago to the present day reveals that it is "always true" that cross-sectional pornography-outcome associations are just as likely due to selective-exposure as sexual socialization; this "never changes," to quote Anna.

This is, of course, antithetical to science. Nothing is "always true" in science, because scientific knowledge "changes" as new knowledge is generated. According to Arendt and Matthes (2017), "Science is cumulative in the sense that each study builds on previous work" (p. 2). According to Hocking and Miller (1974), "Scientists need not start research from scratch. They can build on the prior body of knowledge" (p. 1). According to Sparks (2013), science is "open to modification—as time passes, new evidence may be expected to revise existing ways of thinking about a phenomenon" (p. 14).

If there were no longitudinal studies comparing the sexual socialization and selective-exposure explanations, it would be quite reasonable for cross-sectional pornography effects



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studies to invoke the latter as an equally plausible explanation for the significant associations they found between pornography use and the outcome(s) they studied. Having published a number of cross-lagged longitudinal papers finding evidence for sexual socialization but not selective-exposure, I know that there are such studies, however. A cross-lagged longitudinal study uses panel data to directly compare $X \rightarrow Y$ and $Y \rightarrow X$ explanations for the directionality of the XY relationship. Because earlier levels of the criterion are included as a covariate, a significant prospective association indicates that the predictor is associated with interindividual change in the criterion over time.

To see if there were other studies beyond my own, I conducted Google Scholar searches using the following sets of terms: (1) "pornography" "selective-exposure" "crosslagged" and (2) "pornography" "reverse causality" "crosslagged." Because both dynamics could be at play (Slater, 2015), I also conducted a search for "pornography" "reciprocal" "cross-lagged."

The results of these searches are synopsized in Table 1. Of the 25 studies, the majority (14) found evidence of sexual socialization only; earlier pornography use prospectively predicted one or more of the outcomes studied, but the converse was not the case (i.e., prior levels of the outcome or outcomes did not predict later use of pornography). Ten studies found evidence of a reciprocal dynamic (i.e., prior propensities result in some people being more likely to consume pornography than others and these people were impacted subsequently by their exposure). Just one study found evidence of selective-exposure only. However, as detailed in the table footnote, the pattern of correlations overall suggested a pattern of either reciprocal influence or no influence in either direction.

Also of note are longitudinal panel studies that have found significant pornography \rightarrow outcome associations, after accounting for earlier levels of the outcome. Examples of such studies are listed in Table 2. As Collins et al. (2004) stated in one of the first longitudinal panel studies of media sex effects, "our analyses controlled for adolescents' level of sexual activity at baseline, rendering an explanation of reverse causality for our findings implausible" (p. 287).

In sum, the notion that significant correlations between pornography use and beliefs, attitudes, and behaviors in crosssectional studies could be due entirely to selective-exposure is in contradiction to the accumulated evidence and could only be supported by a philosophy (to counter quote Arendt & Matthes, 2017; Hocking & Miller, 1974; Sparks, 2013) espousing that science is noncumulative and each study is an isolated fragment that stands entirely on its own; that scientists must start from scratch with each study—they cannot build on the prior body of knowledge; and that science is not open to modification—regardless of the passage of time and new evidence, ways of thinking about a phenomenon should not be revised.

Recommendations to Authors, Editors, and Reviewers

Given the above, I recommend the following to authors, editors, and reviewers of cross-sectional pornography effects research finding theoretically predicted significant associations between pornography use and beliefs, attitudes, and behaviors.

- Authors: Do not state that selective-exposure is an equally
 plausible alternative explanation for your findings. If
 reviewers and editors demand you do, provide them with
 this Letter. If they still demand it, write the obligatory-tobe-published "limitation" statement in a way that absolves
 you personally from this uninformed opinion and reference this Letter.
- Reviewers: Do not ask authors to state that selective-exposure is an equally plausible alternative explanation for their results unless you can articulate specifically why their data and findings are such a special and novel case that the accumulated evidence to the contrary is inapplicable. Given the state of the literature, the onus is on you to delineate why the pornographic socialization the authors describe is really just selective-exposure. If the authors make the statement themselves, suggest they remove it and direct them to this Letter.
- Editors: Overrule uninformed reviewers who demand that authors make the selective-exposure caveat. Notify authors of this Letter and suggest that while a case for a reciprocal dynamic can be made, a case for selectiveexposure only is untenable given the state of the literature at present.



Table 1 Cross-lagged longitudinal pornography effects studies comparing sexual socialization and selective-exposure explanations

References	Sample	Method	Selective exposure only?	Sexual socialization only?	Recip- rocal effects?
Doornwaard, Bickham, Rich, ter Bogt, and van den Eijnden (2015)	Adolescents (Netherlands)	Four-wave panel study of pornog- raphy use and sexual permis- siveness. Six months between waves			X
Kohut and Stulhofer (2018)	Adolescents (Croatia)	Three-wave panel study of por- nography and well-being. Six months between waves. Two independent samples tested			X
Martyniuk and Stulhofer (2018)	Adolescents (Croatia)	Two-wave panel study of pornography use and sexual permissiveness. Six months between waves. Two independ- ent samples tested	X^a		
Muusses, Kerkhof, and Finkenauer (2015)	Adults (Netherlands)	Three-wave panel study of pornography use and relational beliefs. One year between waves			X
Peter and Valkenburg (2009a)	Adolescents (Netherlands)	Three-wave panel study of pornography use and gendered attitudes. Six months between waves			X
Peter and Valkenburg (2009b)	Adolescents (Netherlands)	Three-wave panel study of pornography use and sexual satisfaction. Six months between waves			X
Peter and Valkenburg (2010a)	Adolescents (Netherlands)	Three-wave panel study of pornography use and sexual uncertainty. Six months between waves		X	
Peter and Valkenburg (2010b)	Adolescents (Netherlands)	Three-wave panel study of por- nography use and recreational sexual attitudes. Six months between waves			X
Peter and Valkenburg (2011a)	Adolescents and adults (Netherlands)	Two-wave panel study of por- nography use and gendered attitudes. Six months between waves		X	
Peter and Valkenburg (2011b)	Adolescents and adults (Netherlands)	Two-wave panel study of pornog- raphy use and condom use. Six months between waves		X	
Peter and Valkenburg (2014)	Adolescents and adults (Netherlands)	Two-wave panel study of pornog- raphy use and body image. Six months between waves		X	
Vandenbosch and Eggermont (2013)	Adolescents (Belgium)	Two-wave panel study of pornog- raphy and sexual behavior. Six months between waves		X	
Vandenbosch and van Oosten (2018)	Adolescents (Netherlands)	Three-wave panel study of por- nography use and casual sex. Six months between waves			X
Vandenbosch, van Oosten, and Peter (2018)	Adolescents (Netherlands)	Three-wave panel study of pornography use and sexual performance orientation. Six months between waves			X



Table 1 (continued)

References	Sample	Method	Selective exposure only?	Sexual socialization only?	Recip- rocal effects?
Ward, Vandenbosch, and Eggermont (2015)	Adolescents (Belgium)	Three-wave panel study of pornography use and gendered attitudes. Six months between waves		X	
Wright (2012)	Adults (U.S.)	Two-wave panel study of pornog- raphy use and casual sex. Two years between waves		X	
Wright (2015)	Adults (U.S.)	Two-wave panel study of pornog- raphy use and premarital sex attitudes. Two years between waves		X	
Wright and Bae (2013)	Adults (U.S.)	Two-wave panel study of por- nography use and sexuality attitudes. Two years between waves		X	
Wright and Bae (2015a)	Adults (U.S.)	Two-wave panel study of por- nography use and birth control attitudes. Two years between waves		X	
Wright and Bae (2015b)	Adults (U.S.)	Two-wave panel study of por- nography use and gendered attitudes. Two years between waves		X	
Wright and Funk (2014)	Adults (U.S.)	Two-wave panel study of por- nography use and gendered attitudes. Two years between waves		X	
Wright and Randall (2014)	Adults (U.S.)	Two-wave panel study of por- nography use and sociosexual attitudes. Two years between waves		X	
Wright and Tokunaga (2018a)	Adults (U.S.)	Three-wave panel study of por- nography use and birth control attitudes. Two years between waves			X
Wright and Tokunaga (2018b)	Adults (U.S.)	Three-wave panel study of pornography use and abortion attitudes. Two years between waves			X
Wright, Tokunaga, and Bae (2014)	Adults (U.S.)	Two-wave panel study of pornog- raphy use and extramarital sex attitudes. Two years between waves. Two independent sam- ples tested		X	

a This two sample study reported results for males and females separately. After controlling for prior levels of the criterion, earlier pornography use did not predict later permissiveness at the p < .05 level, but earlier permissiveness predicted later pornography use for one sample of males (but not the other) and one sample of females (but not the other) at the p < .05 level. However, the average T1 pornography → T2 sexual permissiveness correlation of r = .22 [average r calculated from the rs for males and females, for each sample: (.20 + .32 + .13 + .21)/(4)] was actually larger than the average T1 sexual permissiveness → T2 pornography exposure correlation of r = .21 [average r calculated from the rs for males and females, for each sample: (.17 + .30 + .19 + .17)/(4)]



 Table 2
 Criterion variable lagged longitudinal pornography sexual socialization studies

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Braithwaite, Aaron, Dowdle, Spjut, and Fincham (2015)	Adults (U.S.)	Two-wave panel study, 3 months between waves	Controlling for earlier nonrelational sex, pornography use still prospectively predicted later nonrelational sex
Braithwaite, Coulson, Keddington, and Fincham (2015)	Adults (U.S.)	Two-wave panel study, 3 months between waves	Controlling for earlier risky sexual behavior, pornography use still prospectively predicted later risky sexual behavior
Brown and L'Engle (2009)	Adolescents (U.S.)	Two-wave panel study, 2 years between waves	Controlling for earlier sexual permissiveness and sexual harassment perpetration, pornography use still prospectively predicted later sexual permissiveness and sexual harassment perpetration
Doornwaard, ter Bogt, Reitz, and Van Den Eijnden (2015)	Adolescents (Netherlands)	Two-wave panel study, 1 year and 6 months between waves	Controlling for earlier sexual experience, pornography use still prospectively predicted later increases in sexual experience
Gwinn, Lambert, Fincham, and Maner (2013)	Adults (U.S.)	Two-wave panel study, 4 months between waves	Controlling for earlier extradyadic behavior, pornography use still prospectively predicted later extradyadic behavior
Leonhardt and Willoughby (2018)	Adults (U.S.)	Two-wave panel study, I year between waves	Controlling for earlier attitudes toward marriage and sexual permissiveness, pornography use still prospectively predicted lower valuations of marriage and sexual permissiveness
Реггу (2017а)	Adults (U.S.)	Two-wave panel study, 6 years between waves	Controlling for earlier martial dissatisfaction, pornography use still prospectively predicted later marital dissatisfaction
Perry (2017b)	Adults (U.S.)	Two-wave panel study, 6 years between waves	Controlling for earlier religiosity, pornography use still prospectively predicted later reductions in religiosity
Tokunaga, Wright, and McKinley (2015)	Adults (U.S.)	Three-wave panel study, 2 years between waves	Controlling for earlier support for abortion, pornography use still prospectively predicted later support for abortion
van Oosten (2016)	Adolescents (Netherlands)	Two-wave panel study, 6 months between waves	Controlling for earlier sexual uncertainty, pornography use still prospectively predicted later sexual uncertainty
van Oosten, Peter, and Vandenbosch (2017)	Adolescents (Netherlands)	Three-wave panel study, 6 months between waves	Controlling for earlier casual sex attitudes, pornography use still prospectively predicted later casual sex attitudes
van Oosten and Vandenbosch (2020)	Adolescents (Netherlands)	Two-wave panel study, 2 months between waves	Controlling for earlier sexually harassing behavior, por- nography use still prospectively predicted later sexually harassing behavior
Vandenbosch and van Oosten (2017)	Adolescents (Netherlands)	Two-wave panel study, 2 months between waves	Controlling for earlier gendered attitudes, pornography use still prospectively predicted later gendered attitudes
Wright (2013)	Adults (U.S.)	Three-wave panel study, 2 years between waves	Controlling for earlier sexual permissiveness, pornography use still prospectively predicted later sexual permissiveness



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