Efficacy beliefs in third-person effects

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Efficacy Beliefs in Third-Person Effects

Abstract

People generally believe they are less susceptible than others to influences of media, and a growing body of research implicates such biased processing, or third-person perception, in public support for censorship, a type of third-person effect. The current study extends research of the third-person effect by studying two efficacy-related concepts in the context of sexual content in films. Analysis of cross-sectional data from 1,012 Singaporeans suggest that people exhibit self-other asymmetries of efficacy beliefs: They believe others are less capable than they are of self-regulation and that censorship is more effective at restricting others' access to sexual content in films. Furthermore, the former belief was directly related to the belief that others are more susceptible to negative influence, and thus was indirectly related to support for censorship; whereas, the latter belief was directly related to support for censorship. Results may help distinguish the roles of self-regulation and government censorship as bases of local media standards.

Keywords: third-person effect, efficacy, self-regulation, censorship, sexual content

Efficacy Beliefs in Third-Person Effects

Extensive research on the third-person effect has shown that people support censorship when they perceive others as being more influenced by "harmful" media than they are themselves. This perception is related to the belief that others are relatively more exposed to such media and, although this perception occurs for many kinds of media content, it is most pronounced for content that may have undesirable influences. This combination of exposure and influence is strikingly similar to conceptualizations of threat in models of risk perception (Fischhoff, Slovic, Lichtenstein, Read, & Combs, 1978; Neuwirth, Dunwoody, & Griffin, 2000; Rogers, 1975; Witte, 1994).

Another key concept in models of risk perception relates to control, where the uncontrollability of a noxious event amplifies perceived risk. Third-person effects research has provided a limited account of control beliefs that may influence support for censorship. Nonetheless, at least two control beliefs may factor into the equation: (1) the belief that, upon exposure to noxious media content, audiences lack the cognitive wherewithal to directly mitigate negative influence and (2) the belief that censorship can effectively reduce exposure. The former belief relates to the efficacy of self-regulation, while the latter belief relates to the efficacy of censorship as a systemic remedy.

Not only may these efficacy beliefs motivate support for censorship, but they may also exhibit the classic self-other perceptual asymmetry that defines third-person perception. Several cognitive biases are helpful to explain why people tend to think that others are more influenced by media than they are themselves. These same biases may produce self-other asymmetries in beliefs about efficacy of self-regulation and of censorship.

Toward a better understanding of the kinds of self-other asymmetries that underlie public support for censorship, the current study evaluates Singaporeans' third-person perceptions of sexual content in films and the effects of those perceptions on support for

censorship. In particular, this study seeks to understand the nature and extent of self-other asymmetries of efficacy beliefs and how those perceptions may directly and indirectly influence support for censorship.

The Need for Censorship

In order to understand why the public may or may not support censorship and why efficacy beliefs may influence these attitudes, it is useful to explore briefly some of the rationale for media content regulation. Content regulation has many forms, including self-regulation, parental mediation, and government censorship (Frau-Meigs, 2003). The need for each different form of restriction can depend on characteristics of the offending media content, as well as on community standards.

For example, Singapore's Media Development Authority recently loosened restrictions on television broadcasts that contain nudity or explicit violence (AFP, 2010). When Lui Tuck Yew, then Minister for Information, Communications and the Arts, explained the policy shift, he emphasized the roles of self-regulation and parental mediation: "We decided that we ought to be governed by the principle that you make [content] available in a way where the adult, and especially the parent, will be in a position to exercise greatest control" (AFP, 2010). In this case, the reassessment of community standards promoted a regulatory scheme that gave individuals more control over their media use. Furthermore, the 2010 report of the Censorship Review Committee specifically recommended new tools to enhance parental mediation, such as Internet filters and simplified content rating schemes, as well as new education programs to improve public media literacy (Goh, 2010). These and other recommendations formed the basis of the policy update.

To the extent that self-regulation and parental mediation are effective at protecting vulnerable segments of the population from harmful effects of media, the shift in regulatory policy should satisfy public concerns about exposure to sex and violence in television

content. This observation has implications for media literacy education, which can buttress effective self-regulation and parental mediation. A report by the Free Expression Policy Project describes media literacy as an organic alternative to censorship:

> Rather than resorting to censorship or ratings schemes in response to the presumed influence of violent or otherwise troublesome messages in popular culture, policymakers should commit to making media literacy an essential part of every young person's education. […] Media literacy is far better than censorship, not only for those concerned about troublesome media messages but for everyone committed to modern education, intellectual freedom, or the healthy development of youth (Heins & Cho, 2003, p. 38).

The construct of media literacy has many facets that relate to the media environment, social factors, and individual differences. However, a central feature of media literacy is that it affords individuals control over their media experiences. This assertion frames the overarching research goal of the current study.

The third-person effects perspective has informed an important area of research focusing on public concerns about harmful media content and public support for censorship. The following sections describe this perspective, explicate concepts of control and efficacy in the context of media use, and integrate these concepts into a model of third-person effects.

Third-Person Effects Perspective

Scholarly reviews of the third-person effect often describe it in terms of two components (e.g., Sun, Shen, & Pan, 2008; Xu & Gonzenbach, 2008). The first component is related to a self-other perceptual asymmetry, which bears on certain cognitive biases, and is the crux of the third-person effect. The second component is related to attitudinal and behavioral outcomes of the self-other perceptual asymmetry. The following sections review literature on third-person perception, relevant cognitive biases that help explain why third-

person perception arises, and some of the attitudinal and behavioral consequences of third-person perception.

Third-person perception

Davison (1983, 1996) described the perceptual component of the third-person effect as people's belief that, given exposure to a persuasive message via mass media, its effect on them would be smaller than its effect on other people. A review of the first decade of research on this effect found that this perceptual bias occurs most consistently when the object of a persuasive message is perceived to be undesirable and when the issue is personally important (Perloff, 1993). More recent research has affirmed these findings, and has sought to identify the psychological origin of the third-person effect.

Gunther and Storey (2003) describe as a *negative influence corollary* the tendency of third-person perception to occur when the object of persuasion is undesirable. Other studies have extended the negative influence corollary beyond persuasive messages to include generally "harmful" media content, including violent video games (Boyle, McLeod, & Rojas, 2008), idealized body image (Chia, 2009), depictions of homosexuality (Ho, Detenber, Malik, & Neo, 2012), alcohol product placement (Shin & Kim, 2011), reality television shows (Sun, Shen, et al., 2008), and "sexting" (Wei & Lo, 2013). By the same corollary, people may believe they are more influenced than others by messages when the content or object of persuasion is desirable. Some studies have documented such an inverse third-person perception of public service announcements (Hoorens & Ruiter, 1996; Innes & Zeitz, 1988; Sun, Shen, et al., 2008; White & Dillon, 2000) and emotional advertisements (Gunther & Thorson, 1992). Observations of third-person perception and its inversion (also called first-person perception) highlight the psychological mechanism that underlies the effect (Andsager & White, 2007).

Some additional factors that influence the magnitude of third-person perception include perceived social distance, audience vulnerability, and likelihood of exposure, (Boyle, Schmierbach, & McLeod, 2013; Eveland, Nathanson, Detenber, & McLeod, 1999; Sun, Pan, & Shen, 2008). Notably, Eveland et al. (1999) found that perceived others' exposure is an important factor related to perceived influence on others, which suggests that people invoke a "magic bullet" theory of communication effects when assessing others' media experiences, and further highlights the psychological basis of the third-person effect.

Sources of perceptual bias

Researchers have related the self-other asymmetry of third- and first-person perceptions to a number of psychological mechanisms, and commonly point to an optimism bias (Gunther & Storey, 2003; Hoorens & Ruiter, 1996). According optimism bias, people view themselves as less likely to be affected by negative events and more likely to be affected by positive events than are other people, and this effect increases with the magnitude of the negative or positive events (Weinstein, 1980). Other researchers have described third-person perception as a consequence of the fundamental attribution error (e.g., D. M. McLeod, Detenber, & Eveland, 2001), in which people attribute an undesirable outcome to situational factors when it occurs to them and to individual characteristics when it occurs to others (E. E. Jones & Harris, 1967; Ross, 1977). In general, such motivational biases that lead to third-person perceptions are self-serving; people tend to think they are better than average, and denying media influence on the self helps support this positive view of the self (Perloff, 2009).

A supplementary argument suggests that the effect arises out of more fundamental cognitive processes. Indeed, people express self-other asymmetries partly because they lack direct access to other's introspections, while having unfettered access to their own. Consequently, people use lay psychology to explain others' thoughts and behaviors, while

exempting their own thoughts and behaviors from the same analysis. This psychological process is related to the introspection illusion, in which people view their own introspection as a highly authentic source of information for self-assessment (Pronin, 2008). Furthermore, as naïve realists, people tend to view their own perceptions as corresponding directly to an observable reality, while others' divergent responses to a common stimulus imply others' distorted perception (Gibbon & Durkin, 1995; Pronin, Gilovich, & Ross, 2004). The combined influence of the introspection illusion and naïve realism help explain the cognitive basis of self-other asymmetries in general and, for current purposes, third-person perceptions in particular. Such cognitions may also help explain self-other asymmetries of efficacy beliefs in the context of media effects. The current study assumes that the third-person effect simultaneously reflects both motivational and cognitive orientations; thus, subsequent arguments refer to both motivational and cognitive processes that may precipitate the third-person effect in relation to efficacy beliefs.

Behavioral consequences

In addition to describing the nature and psychological bases of self-other perceptual asymmetries, scholars have considered their attitudinal and behavioral outcomes (Perloff, 1999; Rojas, 2010; Sun, Shen, et al., 2008; Xu & Gonzenbach, 2008). Sun et al. (2008) describe three categories of behavioral outcomes: promotional behaviors directed at messages with desirable social influences, corrective or educational behaviors directed at messages with ambiguous influences, and restrictive behaviors directed at messages with undesirable social influences. On the subject of restrictive behaviors, a large body of research has found that support for censorship is related to third-person perception of influence of video games (Schmierbach, Boyle, Xu, & McLeod, 2011), television violence (Rojas, Shah, & Faber, 1996), pornography (Gunther, 1995; B. K. Lee & Tamborini, 2005; Rojas et al., 1996; Zhao & Cai, 2008), controversial product advertising (Shah, Faber, & Youn, 1999; Shin & Kim,

2011), and social media (Paradise & Sullivan, 2012), among others. Furthermore, recent research supports the causal relationship between perceived influence and support for censorship, suggesting that the former causes the latter and not the reverse (Tal-Or, Cohen, Tsfati, & Gunther, 2010).

The linkage between third-person perceptions and support for censorship resonates with models of sociotropic influence, which address beliefs about social collectives (J. M. McLeod, Sotirovic, & Holbert, 1998). Because information about social conditions is generally overt, at least in perception, while personal experiences are often compartmentalized, "sociotropic judgments transfer quite easily to political preferences, while personal experiences do not" (Mutz, 1998, p. 108). Consequently, when people perceive collective problems (e.g., harmful effects of mass media), they are more likely to hold social institutions accountable for resolution (e.g., censorship) than when they perceive these problems to affect them personally.

Efficacy Beliefs

Control over perceived risk

In this sociotropic view of censorship, offending media content may constitute a collective risk, as its influence can promote antisocial beliefs and behaviors. Such an evaluation of media influence represents a threat appraisal consistent with protection motivation theory (Shah et al., 1999). Another key concept that appears in protection motivation theory and also in other models of risk perception—e.g., the extended parallel process model and the psychometric paradigm of risk perception—relates to beliefs about control and efficacy (Fischhoff et al., 1978; Neuwirth et al., 2000; Rogers, 1975; Witte, 1994). In the context of perceived risk, "efficacy pertains to the effectiveness, feasibility, and ease with which a recommended response impedes or averts a threat" (Witte, 1994, p. 114). Conversely, *inefficacy* corresponds with inability to mitigate a threat, and thus conveys some

of the risk associated with the threat. Indeed, people tend to view uncontrollable hazards as posing greater risk (Slovic, 1987). In the context of the current study, the belief that audiences are unable to control how the media influence them—i.e., that they have *self-regulatory inefficacy*—should prompt the belief that exposure translates to influence.

When individuals lack the ability to mitigate risk on their own—for example, when the risk is too large or dispersed—they may seek relief through institutional remedies. Support for such remedies relates to another efficacy belief: institutional efficacy. For example, studies of risks related to crime (Perdomo, 2010), food safety (Chou & Liou, 2010), and the environment (N. Jones, Clark, & Tripidaki, 2012) suggest that authorities' failure to effectively control a social risk amplifies perceived risk. Toward mitigating perceived social risks, the public should prefer and support efficacious institutional remedies. Similarly, we suggest that exposure to harmful media content may pose a social risk that government institutions can seek to mitigate and whose efficacy in that regard can alleviate relevant public concerns. Thus, to the extent that people view exposure to media as posing a social risk and to the extent that they positively evaluate *censorship efficacy* for mitigating the risk, they should tend to support censorship.

Self-other asymmetries in efficacy beliefs

Naïve realists believe that they see the media for what they really are and are able to interpret media content accurately and without bias. Consequently, they believe they are able to assimilate "positive" information and filter out "negative" information, while others are less capable in that regard. Their self-assessment depends on having access to their own subjective introspections, while other-assessment relies more on intuitive theories of media effects. Naïve realists who assume a "magic bullet" theory of media effects are prone not only to believe that others' media exposure is tantamount to others being influenced, but also that others being influenced implies others' inability to mitigate influence. This belief has

clear implications for perceived self-regulatory inefficacy, and may precipitate a self-other asymmetry. Shen, Pan, and Sun (2010) demonstrated aspects of this asymmetry, finding that people perceive others to be relatively more susceptible to media influence and less critical in their media use. Susceptibility to influence and uncritical media use imply a lack of cognitive control that may emerge in the form of self-regulatory inefficacy:

H1. There is a self-other asymmetry of perceived self-regulatory inefficacy such that others are less efficacious than self.

A defining feature of efficacy beliefs is the perception of having personal autonomy over behavioral decisions (Ryan & Connell, 1989). When people believe that their intentions primarily determine their behaviors, they have an internal perceived locus of causality; when people view their behaviors as largely the result of external pressures, they have an external perceived locus of causality (Deci & Ryan, 1985). Consistent with the fundamental attribution error and self-serving bias, people may exaggerate in their own behaviors an internal locus of causality (e.g., that they can control their own media experiences) and downplay an external locus of causality (e.g., that censorship controls their media experiences), while inverting these attributions to explain others' behaviors (see Jellison & Green, 1981). Such biased processing further supports the self-other asymmetry of perceived self-regulatory inefficacy and has additional implications for perceived censorship efficacy.

H2. There is a self-other asymmetry of perceived censorship efficacy such that censorship more effectively restricts exposure to harmful media content for others than for self.

This argument leads, as well, to the following hypothesis:

H3. There is a positive relationship between self-other asymmetry of self-regulatory inefficacy and self-other asymmetry of censorship efficacy.

Self-efficacy in third-person effects

Earlier, we suggested that efficacy beliefs should be related to support for censorship, but did not make specific claims regarding self-other asymmetries. However, the aim of this study is to examine the extent to which self-other asymmetry of efficacy beliefs may augment a model of third-person effects. At least two studies help guide such examination. In one study, Haridakis and Rubin (2003) were interested in how self-other asymmetries of exposure to news about terrorism and of ability to ignore media bias, among other factors, influence support for stricter measures to combat terrorism. They found that neither self-other asymmetry predicted the outcome variable, but their study suggests the feasibility of incorporating into a third-person effects model self-other asymmetry of efficacy beliefs. In another study, Lee and Tamborini (2005) found that Internet self-efficacy was marginally-significantly related to third-person perception of Internet pornography. As their measure of Internet self-efficacy did not account for other-perception, their finding does not reveal an effect of self-other asymmetries of efficacy beliefs. Nonetheless, their finding suggests that Internet self-efficacy is related to the belief that self is less influenced than others, and may imply that others' Internet inefficacy is related to the belief that others are more influenced than self. The need to test this assertion motivates a third hypothesis:

> H4. Self-other asymmetry of perceived self-regulatory inefficacy is (a) positively related to self-other asymmetry of perceived influence and (b) indirectly via this path, positively related to support for censorship.

> A similar prediction applies to perceived censorship efficacy, which highlights the "social risk" element that may amplify the need for an effective institutional remedy. That is, beliefs about the capacity of censorship to reduce exposure may have the greatest influence on support for censorship when those beliefs concern others, rather than the self.

H5. Self-other asymmetry of perceived censorship efficacy is positively related to support for censorship.

Finally, we consider potential relationships between exposure and efficacy. Intuitively, self-regulatory inefficacy should be positively related to exposure, as people who cannot control how media influence them probably also lack self-control to avoid exposure in the first place. That is, others' self-regulatory inefficacy indicates a more general self-inefficacy, which may be related to an inability to limit exposure; thus, the relationship between others' self-regulatory inefficacy and exposure is positive and spurious. However, it may also be that having more exposure is akin to having more practice thinking about media messages. Engagement with certain kinds of media is related to better message assimilation (E. J. Lee & Oh, 2013). Although this relationship tends to arise in the context of informational media content, it suggests a potential negative relationship between self-regulatory inefficacy and exposure in the current context. Thus, we pose the following research question:

RQ1. What is the relationship between self-other asymmetries of self-regulatory inefficacy and exposure?

It is also intuitive that censorship efficacy should be inversely related to exposure; by definition more effective censorship means less exposure, and this relationship should be stronger for perceptions of others than of self. However, if one group of others is prone to exposure, while a second group of others is not, censorship would influence mainly the former group and less so the latter group. In this case, censorship efficacy may be positively related to exposure. We consider the nature of this relationship with a second research question:

RQ2. What is the relationship between self-other asymmetries of censorship efficacy and exposure?

Methods

Sample

A random-digit-dial telephone survey gathered data from 1,012 Singapore residents aged 21 and older over a period of two weeks in March 2013. The researchers hired and trained undergraduate students to conduct the interviews from a computer-assisted telephone interview facility at a large public university in Singapore. Three language versions of the survey accommodated speakers of English, Mandarin, and Malay (the three national languages [of four] with the largest percentage of native speakers). Interviews lasted approximately 20 minutes. The response rate was 36.7% using AAPOR formula 3.

Respondents ranged in age from 21 to 82 ($M = 39.76$, $SD = 14.13$; $Mdn. = 40$). The gender split was roughly equal, with 51.7% of the sample being female. The majority of the sample was Chinese (75.5%), followed by Malay (10.3 %), Indian (9.4%), other (3.5%), and Eurasian (1.2%). Median educational attainment was "Diploma" (roughly equivalent to an associate's degree in the U.S.), and median income was in the range of S$4,501 to S$5,500. This demographic profile closely matches official census data.[1]

Measures

Independent variables

We measured perceptions of exposure, influence, self-regulatory inefficacy, and censorship efficacy using six items, which had identical wording except for the referent person and referent content. Half of the items referred to "you" (i.e., the respondent), and half referred to "the average Singaporean." For each referent person, three items referenced different kinds of sexual content: nudity in movies, portrayals of premarital sex in movies, and portrayals of extramarital sex in movies. We computed each self- and other-perception as

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[1] According to census figures from the Singapore Department of Statistics (2012), the ethnic breakdown in Singapore is 74.1% Chinese, 13.4% Malay, 9.2% Indian and 3.3% others. The median household income in Singapore, including retired and unemployed residents, is $5,264; the median age is 38.0 years; and 50.7% of the population is female. Though, among residents aged 15 and above, approximately 51.3% are female and the average age is roughly 40.5 years (Central Intelligence Agency, 2013).

the average of the three items. We adapted items from Ho et al. (2012) to measure perceived exposure and influence, and developed measures of self-regulatory efficacy and censorship efficacy in a pilot study (see the appendix for details).

We measured perceived exposure with responses to "How frequently do/does [referent person] see [referent content]. Response options ranged from 1 = "Never" to 4 = "Very frequently." Both the measure of self- and other-perception had good reliability (α = .88, .87, respectively).

We measured perceived influence with responses to "Please tell me how much you think [referent content] affects [referent person]." Response options ranged from 1 = "Strong positive influence" to 5 = "Strong negative influence." Both the measure of self- and other-perception had good reliability (Cronbach's α = .84, .88, respectively).

We measured perceived self-regulatory inefficacy with reverse-coded responses to "If [referent person] see/sees [referent content], you/they can control how it affects you/them." Response options ranged from 1 = "Strongly disagree" to 5 = "Strongly agree." Both the measure of self- and other-perception had very good reliability (α = .92, .89, respectively).

We measured perceived censorship efficacy with responses to "Without censorship, [referent person] would see more [referent content]. Response options ranged from 1 = "Strongly disagree" to 5 = "Strongly agree." Both the measure of self- and other-perception had very good reliability (α = .93, .92, respectively).

Dependent variable

We measured support for censorship with responses to "Do you think restrictions on [target content] should be [1 = a lot more liberal to 5 = a lot more strict]" (M = 3.47, SD = 0.96). The three-item measure, which we adapted from Gunther and Ang (1996) and Ho et al. (2012), had good reliability (α = .84).

Control variables

Regression analysis showed that three demographic variables—sex, age, and income—were consistently and strongly related to the variables of interest, and especially to support for censorship. We controlled for these variables in our analyses.

Imputation of Missing Values

There was high missingness on income (24.4%) and others' exposure (three items ranging from 18.9% to 20.2%), which was weakly correlated with being female. In addition, missingness on others' exposure was weakly correlated with age. Otherwise, missingness did not exceed 6.9% on any items, and overall missingness was 5.9%. Little's missing completely at random (MCAR) test was significant ($p < .001$), which suggests data are not MCAR; thus, we assumed data are missing at random (MAR). We imputed missing values in Mplus using full information maximum likelihood estimation (FIML). This approach is consistent with recommendations of Buhi, Goodson, and Neilands (2008), who report that FIML imputation of MAR data with 25% missingness only slightly biases estimates in regression models and performs as well as multiple imputation.

Analysis

Testing for self-other asymmetries

A series of Wald tests in Mplus evaluated the self-other asymmetries that hypotheses 1 and 2 propose. Specifically, the analyses tested the null hypothesis that other-perception minus self-perception is equal to zero, which a significant finding would reject.

Analysis of self-other asymmetries

The diamond method isolated self-other asymmetries for analysis (Schmierbach, Boyle, & McLeod, 2008; Sun, Shen, et al., 2008). For each pair of other- and self-perceptions (O and S, respectively), the diamond method calls for three computed variables:

> Variable 1: For all cases, O + S.

> Variable 2: For O > S, O − S, else 0.

> Variable 3: For S > O, S − O, else 0.

The first variable (hereafter, "O + S") is an additive index that corresponds with perceived total influence, the second variable (hereafter, "O − S") is a subtractive index that corresponds with third-person perception, and the third variable (hereafter, "S − O") is a subtractive index that corresponds with first-person perception. By controlling for total influence in a regression model, this method better differentiates effects of O − S and S − O asymmetries and is more theoretically consistent with the third-person effects model that other computational approaches (Sun, Shen, et al., 2008). The diamond method computed three variables for each of the four self-other asymmetries for a total of 12 new variables. Table 1 provides descriptive statistics for and measures of association among these variables, the three demographic control variables, and support for censorship.

Estimating path coefficients

Endogenous variables included support for censorship and O − S asymmetries for exposure, influence, self-regulatory inefficacy, and censorship efficacy. Exogenous variables included S − O asymmetries and the additive indexes for exposure, influence, self-regulatory inefficacy, and censorship efficacy; and the three demographic control variables. The model estimated covariance among exogenous variables freely. Figure 1 gives an example of how the model controlled for exogenous variables. For the sake of visual simplicity, subsequent figures do not depict control variables. The analysis used 10,000 bootstrap samples for determining significance levels and confidence intervals of indirect effects.

Results

Self-other asymmetries

Consistent with prior research, respondents perceived that others are more exposed to sexual content in films ($M = 2.50$, $SD = 0.75$) than they are ($M = 1.94$, $SD = 0.72$; Wald $X^2 = 165.04$, $p < .001$), and that such content has more negative influence on others ($M = 3.56$, $SD = 0.93$) than it has on them ($M = 3.26$, $SD = 0.72$; Wald $X^2 = 234.68$, $p < .001$). In addition, respondents perceived that others have greater self-regulatory inefficacy ($M = 2.81$, $SD = 1.08$) than they do ($M = 2.11$, $SD = 1.14$; Wald $X^2 = 191.88$, $p < .001$) and that censorship efficacy is greater for others ($M = 3.82$, $SD = 1.18$) than for themselves ($M = 3.51$, $SD = 1.32$; Wald $X^2 = 33.21 p < .001$). These latter two findings support H1 and H2. Table 2 summarizes the evaluations of self-other asymmetries.

Path coefficients

In a baseline third-person effects model, O − S exposure predicts O − S influence, which predicts support for censorship (Eveland et al., 1999). Current analyses added to this model. O − S self-regulatory inefficacy as an additional predictor of O − S influence and O − S censorship efficacy as an additional predictor of support for censorship. The overall model (Figure 2) had good fit per Hu and Bentler's (1999) cutoff criteria; $X^2(24) = 43.23$, $p = .01$; RMSEA = .03 (*90% CI*: .0124, .042); CFI = .98; SRMR = .018.

Results show a positive relationship between O − S self-regulatory inefficacy and O − S censorship efficacy ($r = .15$, $p < .001$), which supports H3. Furthermore, O − S self-regulatory inefficacy was positively related to O − S influence ($\beta = .13$, $p < .001$) and, indirectly via this path, support for censorship. The indirect path, which is the product of the two direct paths, was significant ($\beta = .013$, $p = .019$; *90% CI*: .004 .028). These results support H4a and H4b. Finally, censorship efficacy was positively related to support for censorship ($\beta = .07$, $p = .04$), which supports H5. For additional reference, Table 3 shows the

complete regression models predicting O – S influence and censorship, including the effects of control variables.

Relationship between efficacy and exposure

Two significant correlations address the research questions: O – S exposure was positively related both to O – S self-regulatory inefficacy ($r = .13$, $p = .002$) and O – S censorship efficacy ($r = .19$, $p < .001$).

Discussion

This study extended research on the third-person effect to include self-other asymmetries of efficacy beliefs. Although the concept of efficacy has appeared in prior third-person effects research, the current study is the first to examine perceived self-other asymmetries of such beliefs and their influence on a third-person effect.

First, this study found that respondents rated other Singaporeans as being more exposed to and negatively influenced by sexual content in films than they are themselves. Similar findings appear throughout third-person effects research (e.g., Ho et al., 2012; B. K. Lee & Tamborini, 2005; Zhao & Cai, 2008). Going beyond the typical pattern of third-person perceptions and effects, the current study found that respondents perceive others as having relatively less control over how sexual content in films affects them, that censorship more strongly inhibits others' exposure to such content than it does their own, and that these two perceptions are correlated. These findings are consistent with theorizations of cognitive bias, and supported novel hypotheses regarding self-other asymmetries of efficacy beliefs.

 Furthermore, the finding that the two asymmetric efficacy beliefs are correlated suggests a common psychological mechanism, which can involve both cognitive and motivational processes. As a consequence of the introspection illusion (Pronin, 2008), people may conclude that their own exposure and responses to "harmful" media content are largely the result of intention, while other people fit into a generic model of powerful media effects.

Such conclusions would bear on largely cognitive processes. In particular, the relatively large self-other asymmetry of self-regulatory inefficacy may be related to perceptions of others relatively greater gullibility (see Sun, Pan, et al., 2008). Yet, it also enhances the ego for people to feel self-determined in their thoughts and actions (Hodgins, Yacko, & Gottlieb, 2006; Muraven, Gagne, & Rosman, 2008). Such a motivational process would incline people to assert their own internal locus of causality. Both cognitive and motivational processes may hinge on beliefs about cognitive complexity and perhaps on beliefs about media literacy, which further research could explore.

Second, this study found that self-other asymmetries of efficacy beliefs contributed novel elements to the traditional third-person effects model. Findings suggest that the perceptual component of the third-person effect is related to beliefs that others are relatively more exposed to sexual content in films and less able to control how such content influences them. In other words, other's relative inability to control how media influence them is a significant source of influence regardless of the level of exposure. Findings suggest also that other's relatively greater self-regulatory inefficacy is indirectly related to support for censorship.

Regarding censorship efficacy, theory suggests and results support a direct linkage with support for censorship. This finding is rather intuitive, as the belief that censorship is effective is analogous to holding a positive attitude toward censorship. The association between positive attitude and positive preference is one of the best established linkages in psychological research (e.g, Ajzen, 1985, 1991). Thus, the association between censorship efficacy and support for censorship is not theoretically novel; however, it is theoretically useful as a counterpoint to the indirect influence of self-regulatory inefficacy. Considerations of internal locus of causality (in this case, lack thereof) and external locus of causality are related but unique sources of information about the desirability of media content regulation.

In order to further evaluate the effects of asymmetric efficacy beliefs, future research should consider how they may influence support for media literacy education, especially as it may reduce others' relative self-regulatory inefficacy. People who have high media literacy have greater efficacy to identify credibility, bias, believability, and similar characteristics in media messages (Claussen, 2004), and by identifying these characteristics, they can assert greater control over attitudinal and behavioral outcomes of their media use (B. K. Lee & Tamborini, 2005). Thus, media literacy education seems a clear alternative to censorship, and support for such education may be informative to study as a third-person effect.

Finally, two research questions considered linkages between perceived exposure and efficacy beliefs. Regarding the first research question, findings show a positive relationship between self-other asymmetries of self-regulatory inefficacy and exposure. This finding suggests that self-regulatory inefficacy and exposure are related to a fundamental self-inefficacy, which is greater for others than for self. Also, this finding rejects the alternative explanation that people who have more exposure to media also have more practice, and are thus more able to control how it affects them. This alternative explanation may be valid in the context of certain kinds of informational media content, but it fails to account for perceptions of undesirable media content or, at least, sexual content in films.

Regarding the second research question, findings show a positive relationship between self-other asymmetries of censorship efficacy and exposure. This finding is counterintuitive on first glance, as more effective censorship should result in less exposure. We can explain this finding if we consider audience intentions: exposure to sexual content in films is often intentional and, importantly, not incidental. Film rating schemes give audiences information about the nature of a film's content. Thus, when people have a high level of exposure to sexual content in films, it is likely because they are actively seeking it out. Whereas, people who have low exposure are likely avoiding such content intentionally. For

the latter group of people, censorship has little effect, as their exposure is already low. Thus, the effect of censorship on exposure emerges only with respect to the former group of people. Examination of the current operationalization of censorship efficacy further supports this explanation. We measured censorship efficacy as respondents' agreement with the statement, "Without censorship, the average Singaporean would see more [sexual content in films]." Thus, censorship efficacy reflects the belief that other people who have the greatest exposure would seek even more sexual content in films if it were not for censorship. This explanation suggests that the relationship between self-other asymmetries of censorship efficacy and exposure is circular: while effective censorship should reduce exposure to undesirable media content, there must first be exposure for censorship to be effective. A future longitudinal study could clarify this relationship.

Limitations and Conclusion

We should acknowledge two limitations. First, the relatively small proportion of explained variance in support for censorship limits statistical inference. Although the current model explains nearly one-fourth of the variance in support for censorship, much of the explanatory power was linked to control variables and not variables of interest. Further, the large residual variance suggests room for model adjustment or expansion. For example, this study did not account for trust in social institutions (e.g., government), which may have improved the model's explanatory power and helped clarify for whom perceived censorship efficacy matters. Indeed, Singaporeans place considerable trust in the government to act in their best interest, and their support for censorship may hinge significantly on this trust. Additional explained variance might emerge in cross-national studies that make comparisons among different political systems, media environments, and regulatory schemes.

Second, the current study is somewhat limited by the type of media content and behavioral outcomes it considered. Even in the complete absence of government regulation of

sexual content in films, community standards might remain as a powerful, albeit informal, regulatory framework. In Singapore, public screenings of new films would likely continue to reflect conservative content preferences. To the extent that the public implicitly understands the role of community standards in local media programming, they may increasingly view government regulation as unnecessary. Media contexts that are less a part of the shared public experience—for example, Internet pornography—may prove to be more fertile grounds for testing the effects of third-person perception of censorship efficacy and its interaction with other third-person perceptual constructs.

Despite these limitations, the current study elaborates the cognitive processes that underlie public support for censorship. As prior research of third-person effects has shown, support for censorship is related to the perception that the average person has a relatively high risk of suffering adverse effects of "harmful" media. However, such an appraisal of threat will only partly motivate support for censorship. Beliefs about efficacy may further undergird support for censorship, which the current study has documented.

The social context of this study has additional theoretical and practical implications: in Singapore censorship is the norm, which Singapore public opinion generally favors (Gunther & Ang, 1996; Ho et al., 2012). Public support for censorship is likely related to favorable opinion of the government, which further asserts the need to study institutional trust in future research. At the same time, there appears to be a gradual shift in government policy to put content control in the hands of capable media users. This shift reflects careful attention to public opinion of offensive content, and accompanies a call for new measures to promote self-regulation and parental mediation (Goh, 2010). The success of these measures may diminish the perceived need for censorship and engender user-focused content regulation that the public supports. Thus, this study not only contributes to the fields of media psychology and public opinion research, but it may also help distinguish the relative utilities

of self-regulation and government censorship in maintaining reasonable local standards for media content.

Table 1

Variances, covariances, correlations, and means for path-model variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Gender	0.36	-0.68	-0.13	0.12	0.06	0.04	0.02	0.05	0.05	0.00	0.10	0.05	0.01	0.05	0.01	0.05
2. Age	**-.07**	248.37	-2.43	2.60	-3.45	2.42	-0.39	2.83	0.92	-0.38	0.91	2.28	0.07	2.22	0.89	-0.04
3. Income	**-.08**	-.06	7.44	-0.36	0.56	-0.29	0.00	-0.04	-0.03	-0.04	-0.52	0.10	-0.08	0.58	-0.08	-0.15
4. Support for Cens.	**.21**	**.17**	**-.14**	0.92	-0.18	0.15	-0.03	0.49	0.12	-0.03	0.25	0.11	0.02	-0.02	0.12	0.00
5. Exposure (O + S)	**.09**	**-.18**	**.17**	**-.16**	1.42	-0.01	0.03	-0.18	0.02	0.02	0.06	0.05	0.00	0.57	-0.08	0.04
6. Exposure (O − S)	**.09**	**.23**	**-.16**	**.24**	-.01	0.45	-0.04	0.09	0.05	0.02	0.13	0.10	0.02	0.04	0.12	-0.01
7. Exposure (S − O)	**.15**	**-.11**	-.01	**-.12**	**.10**	**-.24**	0.05	-0.05	0.00	0.00	0.01	-0.01	0.01	0.00	-0.01	0.01
8. Influence (O + S)	.05	**.13**	-.01	**.36**	**-.11**	**.09**	**-.14**	2.02	0.17	-0.14	0.40	0.18	-0.02	0.03	0.09	-0.04
9. Influence (O − S)	**.14**	**.10**	-.02	**.20**	.03	**.12**	-.02	**.20**	0.37	-0.09	0.07	0.11	0.01	0.06	0.03	0.01
10. Influence (S − O)	.00	-.05	-.03	**-.06**	.03	.06	-.01	**-.21**	**-.31**	0.21	0.02	-0.03	0.02	0.01	0.01	-0.01
11. Self-reg. Ineff. (O + S)	**.10**	.03	-.11	**.15**	.03	**.11**	.03	**.16**	**.07**	.02	3.27	-0.03	0.16	-0.57	0.06	0.04
12. Self-reg. Ineff. (O − S)	**.09**	**.14**	.04	**.12**	.04	**.15**	-.04	**.12**	**.17**	**-.07**	-.02	1.03	-0.16	0.22	0.10	0.02
13. Self-reg. Ineff. (S − O)	.03	.01	-.06	.03	-.01	.05	.05	-.03	.02	**.09**	**.18**	**-.31**	0.25	-0.02	0.01	0.02
14. Cens. Efficacy (O + S)	.04	**.07**	**.10**	-.01	**.23**	.03	.01	.01	.05	.01	**-.15**	**.10**	-.02	4.35	-0.47	-0.14
15. Cens. Efficacy (O − S)	.02	.06	-.03	**.13**	**-.07**	**.19**	-.03	**.07**	.05	.01	.04	**.10**	.02	**-.24**	0.88	-0.09
16. Cens. Efficacy (S − O)	**.16**	.00	**-.09**	.01	.06	-.02	**.12**	-.05	.03	-.02	.04	.04	.06	**-.12**	**-.18**	0.33
Mean	1.56	38.28	5.03	3.47	4.48	0.58	0.06	6.82	0.47	0.18	4.94	0.86	0.19	7.34	0.50	0.19

Note. The diagonal (shaded) contains variances. Covariances are above the diagonal (shaded) and correlations are below the diagonal. For correlation coefficients in bold, $p < .05$.

Table 2
Descriptive statistics and mean differences of self-other asymmetries

	Mean (SD)		ΔM	Wald $X^2(1)$
	Others	Self		
Influence	3.56 (0.93)	3.26 (0.72)	0.30	234.86***
Exposure	2.50 (0.75)	1.94 (0.72)	0.57	165.04***
Self-regulatory Inefficacy	2.81 (1.08)	2.11 (1.14)	0.70	191.88***
Censorship Efficacy	3.82 (1.18)	3.51 (1.32)	0.32	33.21***

Note. ***$p < .001$.

Table 3
Complete regression models for influence (O − S) and support for censorship

	Influence (O − S)			Support for Censorship		
	B	*SE*	β	*B*	*SE*	β
Sex	0.11	.04	.11**	0.29	.05	.18***
Age	0.00	.00	.04	0.01	.00	.08*
Income	-0.00	.02	-.01	-0.03	.01	-.07*
Exposure						
(O + S)	0.02	.02	.04	-0.09	.03	-.11**
(O − S)	0.08	.04	.08*	0.18	.05	.13***
(S − O)	-0.00	.09	-.00	-0.22	.19	-.05
Influence						
(O + S)	0.05	.01	.11**	0.19	.03	.29***
(O − S)	--	--	--	0.16	.05	.10**
(S − O)	-0.39	.04	-.29***	0.06	.06	.03
Self-regulatory Inefficacy						
(O + S)	0.02	.01	.02	--	--	--
(O − S)	0.08	.02	.13***	--	--	--
(S − O)	0.09	.04	.08*	--	--	--
Censorship Efficacy						
(O + S)	--	--		0.01	.02	.02
(O − S)	--	--		0.07	.03	.07*
(S − O)	--	--		0.02	.07	.01
R^2			.17			.24

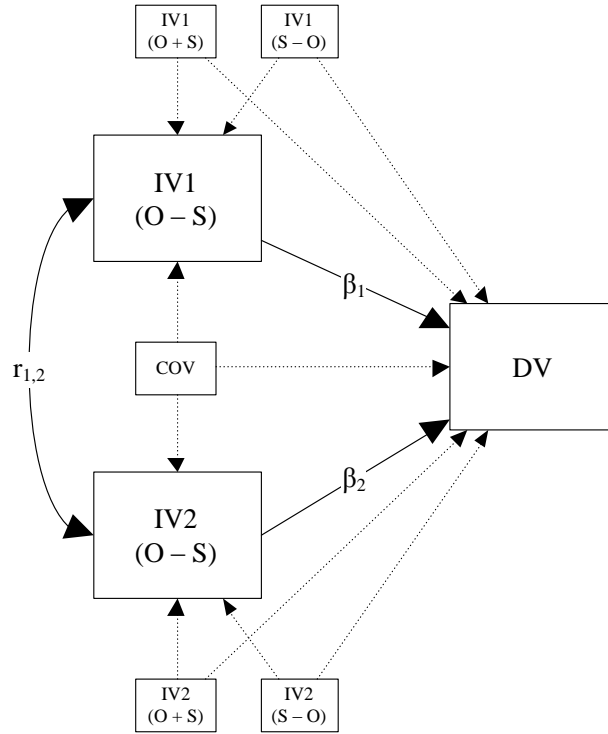*Note*. *$p < .05$. **$p < .01$. ***$p < .001$.

Figure 1. Two independent variables (IV1, IV2) predict a dependent variable (DV), controlling for a covariate (COV). The relationships of interest are related to $O - S$ asymmetries. Path β_1 controls for, in addition to the covariate, the additive indices and $S - O$ asymmetries of IV1. Path β_2 controls for, in addition to the covariate, the additive index and $S - O$ asymmetry. Finally, this model isolates the $O - S$ asymmetry of IV1 and IV2 by controlling for the covariate and their respective additive indices and $S - O$ asymmetries. This isolation allows correlation of IV1 and IV2.
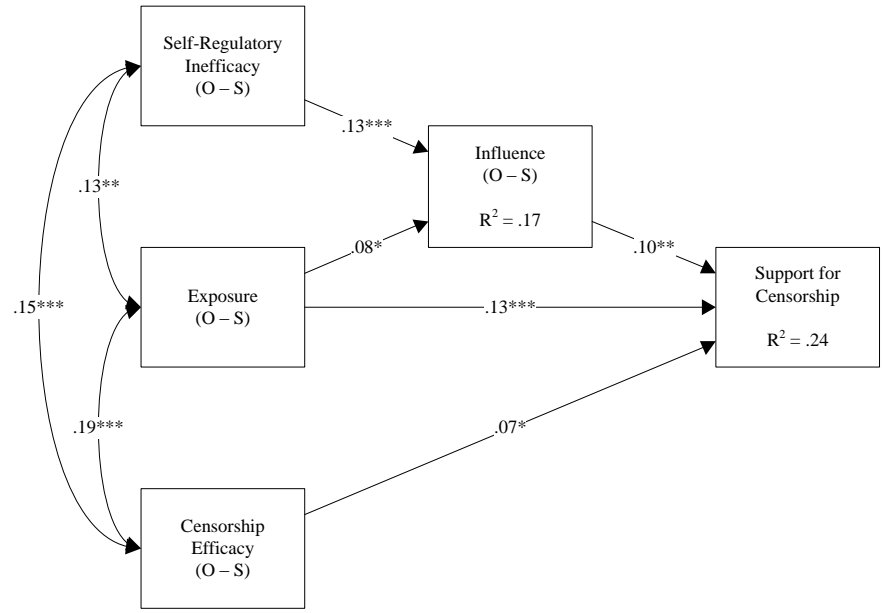
Figure 2. Support for censorship is related to O – S exposure, O – S influence, O – S self-regulatory inefficacy and O – S censorship efficacy and support for censorship both directly and indirectly. This model does not depict control variables, which convey a large portion of explained variance. *$p < .05$. **$p < .01$. ***$p < .001$.

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Appendix

We developed six-item indexes for self-regulatory inefficacy and perceived censorship efficacy in a pilot study, which we administered to a convenience sample of 44 undergraduate students. Responses to open-ended questions suggested that respondents understood that the notion of "control over effects" refers to cognitive processes that can mitigate the effects of media on thoughts, feelings, and behaviors, and that mechanisms other than censorship—such as self-regulation—can effectively limit exposure The latter finding is important because, given sufficiently effective alternatives, censorship is less impactful. Exploratory factor analysis with maximum likelihood extraction and oblique rotation resulted in two factors that explained 75% of the variance in the 12 items and had good simple structure (i.e., each item had a strong factor loading [$\lambda > .6$] on exactly one factor). Common factor analysis within each six-item index failed to converge; however, principal components analysis revealed simple structure that distinguished between perceptions of self and others.

We submitted the six-item indices from the main study—each split into two sets of three items for perceptions of self and others—to confirmatory factor analysis in Mplus, using the default maximum likelihood estimator. The four-factor model had good fit per Hu and Bentler's (1999) recommendations [$\chi^2(48) = 195.36$, $p < .001$; CFI = .98; RMSEA = .06 (90% CI: .05, .06); SRMR = .02] , and standardized factor loadings all exceeded .85.