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### Putting things in perspective. Young people's susceptibility to the effects of sexual media content

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Chapter 3

**INVESTIGATING LONGITUDINAL RELATIONSHIPS  
BETWEEN SEXY SELF-PRESENTATIONS ON SOCIAL  
NETWORK SITES AND ADOLESCENTS'  
SEXUAL SELF-CONCEPT**



**Abstract**

Previous research has suggested that adolescents' social network site use is related to their sexual self-concept, but systematic empirical research on the issue is lacking. The present study investigated the relationships between self- and other-generated sexy self-presentations (i.e., posting sexy pictures of themselves or looking at sexy pictures of others) on social network sites (SNSs) and a relevant aspect of adolescents' sexual self-concept (i.e., the importance of being sexually outgoing) over time. Results from a representative two-wave panel study among 1,586 Dutch adolescents (aged 13-17) showed that both self- and other-generated sexy self-presentations influenced adolescents' sexual self-concept directly. In addition, looking at others' sexy self-presentations also had an indirect influence on sexual self-concept through increased favorability of prototypes of sexual others. Moreover, adolescents' sexual self-concept predicted their exposure to sexy self-presentations of others, as well as their own sexy self-presentation over time. These results did not differ for boys and girls.

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In the past years, social network sites (SNSs) have become an important part of adolescents' lives. SNSs have often been described as a platform where adolescents interact and share information with their friends (Pempek, Yermolayeva, & Calvert, 2009). At the same time, SNSs help adolescents develop their identities (e.g., boyd, 2007; Young, 2013), that is, their sense of who they are and who they wish to become (Steinberg, 2008). For instance, by posting information about themselves online and engaging in self-disclosure, adolescents can experiment with an identity and connect to a peer group they identify with (e.g., Barker, 2009; boyd, 2007; Livingstone, 2008; Livingstone & Brake, 2010; Manago, Graham, Greenfield, & Salimkhan, 2008).

Within research on SNSs, scholars have recently started to focus on a particular part of adolescents' identity development, that is, the exploration of their sexual self-concept on SNSs (Ringrose, 2010, 2011; Ringrose & Eriksson Barajas, 2011). Sexual self-concept refers to individuals' sense of their sexual selves and how they see themselves as a sexual person, and should not be confused with their sexual orientation (e.g., Breakwell & Millward, 1997; Buzwell & Rosenthal, 1996). There is some evidence that sexual self-concept exploration on SNSs may occur through sexual self-disclosure or self-presentation (e.g., Ringrose, 2010, 2011; Ringrose & Eriksson Barajas, 2011). For instance, interviews with young girls showed that they use SNSs to experiment with sexual self-concepts, for instance by identifying with Playboy bunny culture, and by using sexualized user names (e.g., "Kinky Slut", "Lisa Mc Slut", Ringrose, 2011, p. 109) and photos (e.g., showing cleavage) on their personal profiles (Ringrose, 2011).

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However, previous studies have largely focused on *describing* activities such as sexy self-presentations on SNSs and can merely suggest that such activities are related to the formation of adolescents' sexual self-concept. Empirical evidence of a relationship between sexy self-presentations online on SNSs and adolescents' sexual self-concept is still lacking. The first aim of this study was therefore to investigate the relationship between sexy self-presentation and adolescents' sexual self-concept. We investigated this relationship over time to also address causality issues.

The main purpose of SNSs for adolescents is to be in contact with their friends and peers (Barker, 2009; Gross, 2004; Lenhart & Madden, 2007). Friends and peers, in turn, have been shown to influence the formation of adolescents' self-

concept. More specifically, highly admired and popular peers become prototypes of desired identities (Brechwald & Prinstein, 2011), which have been related to young people's self-concept (e.g., Houlihan et al., 2008). Favorability of prototypes of sexual others may thus explain why exposure to sexy self-presentations of others may affect adolescents' sexual self-concept, but this has yet to be empirically established. The second aim of our study was therefore to investigate whether exposure to sexy self-presentations of others on SNSs influences adolescents' sexual self-concept, notably through the effects of such exposure on the perceived favorability of prototypes of sexual peers.

Finally, adolescents' sexual self-concept likely affects both whether they look at their peers' sexy self-presentations on SNSs (selective exposure, e.g., Dillman Carpentier, Knobloch, & Zillmann, 2003; Knobloch, Callison, Chen, Fritzsche, & Zillmann, 2005) and how they present themselves on such sites. Therefore, a third aim of the present study was to investigate whether adolescents' sexual self-concept predicted their exposure to others' sexy self-presentations, as well as their own sexy self-presentation. Given the gender differences in SNS use and online behavior found in previous research (Barker, 2009; Pempek et al., 2009; Rui & Stefanone, 2013), we also studied whether the relationships between adolescents' sexual self-concept and the sexy self-presentations of self and others differed between boys and girls.

In this study, we focus on sexy self-presentations in the form of sexually suggestive pictures on SNSs because posting pictures is one of the most frequent activities on social network sites (Lenhart & Madden, 2007) and is often used as a tool for expressing one's identity (Pempek et al., 2009; Süibak, 2009; Young, 2009, 2013).

### **Effects of Online Self-Presentations on Self-Concept**

It has been increasingly acknowledged that adolescents do not possess one single self-concept, but instead develop different self-concepts that together form one's overall identity (Harter, Bresnick, Bouchev, & Whitesell, 1997; Shapka & Keating, 2005). Within these differentiated self-concepts, adolescents are able to identify their 'core-selves,' that is, the self-concepts that are most important for determining who they really are (Harter et al., 1997) and that most strongly predict individuals' behavior (e.g., Swann, Chang-Schneider, & Larsen McClarty, 2007). The importance of certain self-concepts for adolescents' identity tends to

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fluctuate (e.g., Cassidy & Trew, 2001; Shapka & Keating, 2005). Moreover, the importance of a self-concept is likely to be influenced by contextual and social factors. For instance, it has been shown that positive changes in social relationships (i.e., becoming closer with university friends) that are related to certain self-concepts (i.e., student identity) increase the importance of that particular self-concept for one's overall identity (Cassidy & Trew, 2001). This also implies that sexual self-concepts may be more or less important for adolescents' overall identity, and that the importance of sexual self-concepts for their identity may be influenced by adolescents' social (sexual) environment, including social network sites.

Regarding self-presentations on social network sites specifically, it has recently been argued that adolescents' sexy self-presentations may influence the importance of sexual self-concepts for their identity through the internalization of the sexy attributes that they show to an online audience on SNSs (Collins, Martino, & Shaw, 2011; Shafer, Bobkowski, & Brown, 2013). This argument is supported by recent studies on the effects of self-presentations on self-views and identity (Fox, Bailenson, & Tricase, 2013; Gonzales & Hancock, 2008; Walther et al., 2011). Research on computer-mediated communication has found evidence of a phenomenon called identity shift, which refers to changes in people's identity as a result of self-generated content online (Gonzales & Hancock, 2008, 2010; Van Der Heide, Schumaker, Peterson, & Jones, 2012; Walther et al., 2011). For instance, participants who were asked to present themselves as introverts online actually perceived themselves as more introverted afterwards (Gonzales & Hancock, 2008; Walther et al., 2011). Similarly, it has been shown that playing a game with a sexualized avatar resulted in the internalization of the avatar's appearance, in the sense that this appearance became more important in thoughts about the self (Fox et al., 2013).

The effects of online self-presentations on the importance of a self-concept for one's identity can be explained by three mechanisms, namely self-perception, biased scanning, and public commitment, which often go hand-in-hand (e.g., Schlenker, Dlugolecki, & Doherty, 1994). First, self-perception refers to the process of inferring beliefs about the self by observing oneself from a third party perspective (Bem, 1972). The process of self-perception can be further enhanced by feedback that one receives about the self-presentations (Walther et al., 2011). Second, according to the biased scanning version of self-perception theory

(Jones, Rhodewalt, Berglas, & Skelton, 1981), presenting oneself in a certain way requires a biased search through memory for information about compatible attributes of the self. This makes certain attributes more salient in memory, which determines further self-evaluations (Schlenker et al., 1994). Third, according to the public commitment perspective, individuals strive for consistency between their self-concept and the impressions they create towards others. The public nature of online self-presentations thus makes it more likely that people behave in accordance with their self-presentation (Gonzales & Hancock, 2008; Kelly & Rodriguez, 2006). Moreover, through this public commitment, certain attributes are linked more strongly to one's overall identity, in addition to becoming more salient in memory (Schlenker et al., 1994).

Although previous research on the effects of self-presentation has mostly focused on self-appraisals in the form of attitudes or the degree to which one possesses certain attributes (e.g., Gonzales & Hancock, 2008, 2010; Van Der Heide et al., 2012; Walther et al., 2011), self-presentation may also influence the importance of certain self-concepts for one's identity. After all, through self-perception, biased scanning, and public commitment, the self-concept one presents to others becomes more salient in memory and more strongly linked to one's overall identity (e.g., Schlenker et al., 1994). Thus, when adolescents present themselves in a sexual way online, their sexual attributes may become more important for their overall identity, which over time may solidify through repeated self-perception, feedback, and public commitment (Shafer et al., 2013). This merges with previous notions about the origins of sexual self-concepts. A sexual self-concept is said to be derived from previous experience and learning and is strengthened when others reinforce behavior that is part of that self-concept (Andersen & Cyranowski, 1994).

Consistent research evidence has emerged that the sexy self-presentations of adolescents on SNSs are typically characterized by being flirty, wild, and seductive and by giving the impression that one is sexually available (e.g., Kapidzic & Herring, 2014; Peluchette & Karl, 2009; Ringrose, 2010, 2011; Tortajada-Giménez, Araña-Baró, & Martínez-Martínez, 2013). These attributes may be related to what we call a sexually outgoing self-concept in this study. Rather than looking at adolescents' sexual concept in general, we focus specifically on their sexually outgoing self-concept for three reasons. First, research has shown that adolescents, in particular, develop different 'sexual

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selves,' or perceptions of themselves as a sexual person and their qualities in the sexual domain (Buzwell & Rosenthal, 1996). Second, it has been well established that there are different sexual aspects that can be more or less descriptive of the sexual self (Andersen & Cyranowski, 1994). Third, being sexually outgoing is not just a characteristic aspect of adolescents' self-presentations on social network sites, but also characteristic of their overall sexual behavior (Buzwell & Rosenthal, 1996). Moreover, adolescents become more sexually confident and less sexually anxious and reserved as they grow older, which in turn predicts adolescents' experience with sex (Hensel, Fortenberry, O'Sullivan, & Orr, 2011).

In sum, when adolescents present themselves in a sexy way online, their sexually outgoing self-concept may become (more) salient. When the sexually outgoing self-concept becomes more salient, it may also become more important for adolescents' perceptions of who they are as a person in general. To investigate the effects of posting sexy pictures of oneself online on adolescents' sexual self-concept, we thus hypothesized:

H1: The more adolescents present themselves in a sexy way online, the more important their sexually outgoing self-concept becomes for their overall identity.

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### **Exposure to Sexy Self-Presentations of Others and Sexual Self-Concept**

Adolescents not only present themselves in sexual ways on SNSs, but also use SNSs to look at the sexy self-presentations of others. Sexy presentations of the self on SNSs and viewing sexy self-presentations of others may each have separate influences on adolescents' sexual self-concept. Although it has been argued that looking at others' self-presentations influences impressions of others (Oliver & Krakowiak, 2009), empirical studies on how precisely looking at others' self-presentations may affect one's self-concept are rare (Haferkamp & Krämer, 2011). However, adolescents have been said to look at popular and admired peers as role models and to change their own identity by adjusting to the values of these role models (Brechtwald & Prinstein, 2011). In a similar vein, looking at others' sexy self-presentations on SNSs may thus influence the importance of adolescents' sexually outgoing self-concept.

Although the popularity of peers plays a role in the influence of peer behavior on identity (Brechtwald & Prinstein, 2011), it has not yet been studied as a

mechanism underlying the influence of exposure to others' sexy self-presentations on SNSs on adolescents' self-concepts. This gap in the literature is surprising because research on prototype perception (Gibbons & Gerrard, 1995) has shown that when adolescents are exposed to depictions of appealing characters who engage in a behavior in a positive or desirable way, their prototypes (i.e., social image of a typical person engaging in that behavior) of that behavior become more favorable (e.g., Dal Cin et al., 2009; Gibbons et al., 2010). Favorable prototypes, in turn, may be related to adolescents' own (desired) self-concept. In fact, research has shown that the perceived favorability of a prototype is linked to one's perception of similarity between the self and the prototype (Gibbons & Gerrard, 1995; Gibbons, Gerrard, & McCoy, 1995), and to one's self-concept (Houlihan et al., 2008).

Against this backdrop, it can be expected that exposure to others' sexy self-presentations influences adolescents' sexual self-concept through the favorability of the sexual peer prototype. Online self-presentations are often characterized by presenting a desirable and appealing image of oneself (Krämer & Haferkamp, 2011; Toma & Hancock, 2010; Young, 2009, 2013) and is typically evaluated positively by others (e.g., Crescenzi, Araña, & Tortajada, 2013). This may be especially true for sexy self-presentations, as looking sexy on pictures is among the most important ways to gain popularity on social networking sites (e.g., Bailey, Steeves, Burkell, & Regan, 2013; Siibak, 2009). The popularity of sexy peers on SNSs may thus imply that looking at sexy self-presentations of others results in favorable prototypes of sexual peers. As was mentioned before, adolescents' sexy self-presentations on SNSs are characterized by being sexually outgoing. Therefore, looking at sexy self-presentations of others (i.e., popular peers engaging in sexually outgoing behavior) may result in a more positive social image, or prototype, of a peer engaging in sexually outgoing behavior. The favorability of the prototype of a sexually outgoing peer, in turn, is likely to be related to adolescents' sexual self-concept. To test the indirect relationship, we hypothesized:

H2: The more adolescents look at sexy self-presentations of others, the more important their sexually outgoing self-concept becomes for their overall identity.

H3a-b: The more adolescents look at sexy self-presentations of others on SNSs, the more favorable their prototypes of others engaging in sexually outgoing behavior become (H3a). Having more favorable prototypes of others engaging in sexually outgoing behavior, in turn, is positively related to how important a sexually outgoing self-concept becomes for adolescents' overall identity (H3b).

### **Selective Exposure and Impression Management on SNSs**

According to selective exposure theory (e.g., Dillman et al, 2003; Knobloch et al., 2005), people are more likely to expose themselves to media content that is congruent with their attitudes and behavior and to avoid media content that is not. Thus, adolescents who feel that being sexually outgoing is important for their identity may be more likely to expose themselves to sexy self-presentations of others. At the same time, SNSs have been considered a way to express the identity one already holds (Shafer et al., 2013). Moreover, it has been argued that adolescents who feel it is important to be sexually outgoing and to be seen as sexy, may be more likely to present themselves in a sexy manner (e.g., Buzwell & Rosenthal, 1996). In fact, research has shown that emerging adults who were more sexually active and engaged in more casual sex were also more likely to disclose themselves sexually on SNSs (Bobkowski, Brown, & Neffa, 2012).

In this context, scholars have suggested that individuals for whom being sexy is more important for their identity are more likely to produce sexual content themselves (Shafer et al., 2013). This notion is in line with the two-component model of impression management (Leary & Kowalski, 1990), which posits that people intend to control the impression that others have of them. Once people are motivated to control how others see them, they construct that impression by deciding how to present themselves to others (Leary & Kowalski, 1990). This impression construction is determined primarily by a person's self-concept or (desired) identity (Leary & Kowalski, 1990). Given the literature on selective exposure and impression management, we hypothesized:

H4a-b: The more important being sexually outgoing is for adolescents' overall identity, the more they will expose themselves to sexy self-presentations of others (H4a) and present themselves in a sexy way (H4b) on SNSs.

### **Gender Differences**

Previous research has shown that boys and girls differ in their SNS use. For instance, girls are more likely to post pictures of themselves online (Pempek et al., 2009; Rui & Stefanone, 2013) and use profile pictures for impression management (McAndrew & Jeong, 2012). It has been argued that the high degree of sexy self-presentation by girls on SNSs reflects the sexualization of women in traditional media (Hall, West, & McIntyre, 2012). Consequently, girls tend to engage in sexy self-presentation more frequently than boys. Moreover, girls experiment more with sexual self-concepts on SNSs (Ringrose, 2010, 2011; Ringrose & Eriksson Barajas, 2011). This may imply that girls' sexual identities are more likely to be influenced by their SNS use. As a result of the higher frequency of sexy self-presentation and the greater exploration of sexual self-concepts online, the influence of sexy self-presentation on the importance of adolescents' sexual self-concepts may be stronger for girls than for boys.

Boys, by contrast, seem to use SNSs more often for social identification and to learn about the social world than girls (Barker, 2009). As a result, boys may be more likely to look at admired peers when forming their self-concepts. As a result, the relationships between looking at sexy self-presentations of others and the importance of adolescents' sexual self-concepts may be stronger for boys. However, as existing research and theorizing is not sufficiently developed to substantiate hypotheses, we refrained from forming specific hypotheses about differential effects for boys and girls and instead explored a possible moderating role of gender in the hypothesized relationships. The following research questions were investigated: Does the reciprocal association between sexy self-presentation on SNSs and sexual self-concept differ between boys and girls (RQ1)? Does the reciprocal association between exposure to others' sexy self-presentations on SNSs and sexual self-concept differ between boys and girls (RQ2)? Does the indirect effect of exposure to others' sexy self-presentations on SNSs on sexual self-concept through prototypes of sexual others differ between boys and girls (RQ3)?

## **Method**

### **Sample and Procedure**

We analyzed data from a two-wave longitudinal panel survey that was conducted among a nationally representative sample of Dutch adolescents (aged 13-17; 50% female) in May and June 2013 (wave 1) and November and

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December 2013 (wave 2). We used a panel from the Dutch research company Veldkamp, which is originally sampled randomly among the Dutch population and is continuously updated. The pool of respondents can thus be considered representative of the Dutch population. Our sample was randomly selected from this pool of respondents, which reduces self-selection biases and precludes snowballing effects in the sampling process. The response rate of the first wave was 78% and the response rate of the second wave was 83% (attrition 17%), resulting in a sample of 1,765 participants. From the original sample, we could only analyze the data for adolescents who had indicated that they used social network sites in both waves, resulting in a final sample of 1,586 participants (51.9% female) with a mean age of 15 ( $SD = 1.40$ ).

Ethical approval from the University of Amsterdam, as well as informed consent of the adolescents' parents and the adolescents themselves, were obtained before the start of the study. Respondents were asked to complete an online survey at home, which is a suitable alternative to other survey modes for sensitive issues such as sexuality (Mustanski, 2001). Respondents were notified that the study was about sexual issues, that they could stop at any time they wished, and that the principal investigators could not trace identifying information. After completion of each wave, the respondents received a voucher worth five Euros.

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### Measures

**Sexy self-presentation.** Respondents were told that “some teenagers use social media sites (e.g., Facebook, Twitter, Instagram) to show sexy pictures of themselves, whereas some teenagers do not”, and were then asked how often in the past 6 months they had posted pictures on SNSs of themselves (a) with a sexy gaze, (b) with a sexy appearance, (c) scantily dressed (e.g., bathing suit or underwear), and (d) with a sexy pose. Response options ranged from 1 (*always*) to 7 (*never*). Items were recoded so that higher scores indicated more frequent sexy self-presentation online. The four items formed a uni-dimensional scale, with an explained variance of 70% or higher and good reliability (Cronbach's  $\alpha > .85$ ) in both waves ( $M = 1.36$ ,  $SD = .69$  in wave 1;  $M = 1.37$ ,  $SD = .71$  in wave 2).

**Looking at sexy self-presentations of others.** After answering the question about their own sexy self-presentation, respondents were asked to think about pictures of others on SNSs and to indicate how often in the past 6 months they had looked at pictures on social media sites (e.g., Facebook, Twitter, Instagram) of others (a) with a sexy gaze, (b) with a sexy appearance, (c) scantily dressed (e.g., bathing suit or underwear), and (d) with a sexy pose. Response options ranged from 1 (*always*) to 7 (*never*). Items were recoded so that higher scores indicated more frequent exposure to sexy online self-presentations of others. The items formed a uni-dimensional scale, with an explained variance of 86% and good internal consistency (Cronbach's  $\alpha = .95$ ) in both waves ( $M = 3.09$ ,  $SD = 1.48$  in wave 1;  $M = 3.17$ ,  $SD = 1.44$  in wave 2).

**Importance of being sexually outgoing for one's identity.** To create a scale that measured the importance of being sexually outgoing for one's identity, we based our procedure on Aquino and Reed's (2002) development of a scale to measure the self-importance of a moral self-concept. Similar to Aquino and Reed (2002), we first conducted a pilot study to validate a set of traits that many people may consider to be characteristic of a sexual person<sup>1</sup>. We then used the traits that were most likely to capture being sexually outgoing as self-concept-invoking stimuli in the survey among adolescents. Similar to the procedure by Aquino and Reed (2002), we choose to invoke a sexually outgoing self-concept instead of asking directly about sexually outgoing traits because this could have created a social desirability bias. The traits are not meant to be an exhaustive set of traits of a sexually outgoing person, but instead are used to activate mental associations of such a sexual self-concept. The self-importance of this self-concept for participants' overall identity is subsequently measured (cf. Aquino & Reed, 2002).

Respondents were presented with the six traits describing a sexually outgoing person ('dressed sexy,' 'outgoing,' 'flirtatious,' 'popular,' 'seductive' and 'wild') and given the following instructions: "Read this list of traits and think about how important these traits are for determining who you are." They were then asked to answer the following questions on a scale from 1 (*totally agree*) to 7 (*totally disagree*): "These characteristics are an important part of who I am," "Having these characteristics is an important part of my sense of self," and "These characteristics determine a large part of who I am." These questions were based on the items with high factor loadings in the measure by Aquino and Reed

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(2002). Items were recoded such that a higher score indicated a greater importance of being sexually outgoing for one's overall identity. The items formed a uni-dimensional and reliable scale with an explained variance of 94% and a Cronbach's alpha of .97 in both waves ( $M = 3.11$ ,  $SD = 1.55$  in wave 1;  $M = 2.98$ ,  $SD = 1.51$  in wave 2).

To validate the construct we examined associations between our sexual self-concept construct and other constructs in the survey that were expected to be positively related to the importance of being sexually outgoing for one's identity: sexual experience ( $r = .23$ ,  $p < .001$ ), impersonal sex orientation ( $r = .38$ ,  $p < .001$ ) (e.g., Simpson & Gangestad, 1991), and sensation seeking ( $r = .54$ ,  $p < .001$ ) (e.g., Lee, Sadowski, Cheek, & Cheek, 1991).

**Prototypes of sexual peers.** To measure the favorability of a prototype of a sexual peer, we used a scale that was based on a measure of *prototype perception* by Gibbons and Gerrard (1995). A prototype refers to a typical person who would engage in a particular behavior (e.g., Gerrard, Gibbons, Houlihan, Stock, & Pomery, 2008; Gibbons et al., 1995; Gibbons & Gerrard, 1995). In the present study we chose to investigate prototypes of peers engaging in loose sexual contacts because this type of sexual behavior resembles the way in which adolescents present themselves sexually on SNSs (i.e., as "always up for it", e.g., Ringrose, 2010, p. 176) and thus a sexually outgoing person.

Respondents were asked the following question about a person of their own gender: "Imagine a boy/girl that has many loose sexual contacts. According to you, which characteristics are typical for this boy/girl? A boy/girls that has many loose sexual contacts is... (a) attractive, (b) spontaneous, (c) interesting, (d) desired, (e) confident." Response categories ranged from 1 (*totally agree*) to 7 (*totally disagree*). Items were recoded such that higher scores indicated a more favorable prototype. The five items formed a uni-dimensional scale with an explained variance of 76% or higher and good reliability (Cronbach's alpha  $> .92$ ) in both waves ( $M = 3.88$ ,  $SD = 1.67$  in wave 1;  $M = 3.77$ ,  $SD = 1.67$  in wave 2).

**Control variables.** When testing our hypotheses, we controlled for gender, age and sexual experience, because these variables may influence the hypothesized

relationships (e.g., Hensel et al., 2011; Houlihan et al., 2008). Gender was coded 1 for boys and 2 for girls and age was measured in years. Sexual experience was measured by having respondents answer, with 'yes' (coded 1) or 'no' (coded 0), whether they had experience with the following sexual behaviors: (a) touching each other's genitals, (b) giving or receiving oral sex, and (c) vaginal intercourse. Gay and lesbian adolescents, and those who were undecided about their sexual orientation, answered a question about 'having sex' rather than 'vaginal intercourse' to avoid a heterosexual bias. The three items loaded on one factor with an explained variance of 80%. Because the internal structure of the measurement was hierarchical and thus heterogeneous, Cronbach's alpha would be biased (Tang & Cui, 2012). We therefore used Guttman's Lambda 2 to calculate the reliability (Guttman, 1945; Tang & Cui, 2012), which showed good reliability of the items ( $\lambda_2 = .87$ ). Items were averaged to form the variable 'sexual experience' ( $M = .15$ ,  $SD = .26$  in wave 1).

**Data analyses.** The hypotheses were tested with structural equation modeling (in AMOS 21), using autoregressive models that included levels of the dependent variables at wave 1, along with the simultaneous influence of the independent variables at wave 2, to eliminate potentially confounding influences (Cole & Maxwell, 2003). The latent variables frequency of sexy self-presentation, exposure to others' sexy self-presentations, sexual self-concept, and prototypes of sexual others were created by having each latent variable load on the manifest items used to measure that construct. Control variables were drawn as manifest variables in the model, and regressed on the variables at wave 2. The control variables and the independent variables at wave 1 were allowed to covary with each other, as were the disturbance terms of the variables at wave 2 and the error terms of the identical items between the first and the second wave.

To account for the violation of the normality assumption in our variables, we used the bootstrap method in addition to our parametric tests (Efron & Tibshirani, 1993). In this method, a computer generates a series of data sets that would be obtained if the study were repeated many times. Each bootstrap sample results from sampling, with replacement, from the original sample. In all the bootstrap samples, the value of interest is computed. This nonparametric approach estimates values of interest without making assumptions about the sampling distribution of the statistic, and therefore produces more accurate

results if normality assumptions are violated. We estimated 95% bias-corrected confidence intervals (95% BCI) of the standardized estimates on the basis of 1,000 bootstrapping samples ( $N = 1,586$  each). When the 95% BCI does not include zero, the effect can be assumed to differ significantly from zero, and thus refers to a statistically significant relationship.

**Results**

**Relationship between Sexy Self-Presentation and Sexual Self-Concept**

Zero-order correlations between the variables are shown in Table 1. To test our first hypothesis, namely that the more adolescents present themselves in a sexy way on SNS, the more important their sexually outgoing self-concept becomes for their overall identity, we analyzed the model in Figure 1. In this analysis we controlled for gender, age, sexual experience, and the manifest variable of exposure to sexy self-presentations of others (wave 1). Figure 1 shows a simplified model with only the main latent variables, represented as ellipses. The fit of the model in Figure 1 was acceptable,  $\chi^2(104, N = 1,586) = 369.49, p < .001, CFI = .99, RMSEA = .04$  (90% confidence interval: .04/.05). Our findings showed that the more adolescents engaged in sexy self-presentation on SNSs (in wave 1), the more important their sexually outgoing self-concept became for their overall identity (in wave 2),  $\beta = .12, B = .21, SE = .05, p < .001$  (95% BCI: .06/.17),  $R^2 = .35$ . Hypothesis 1 was thus supported.

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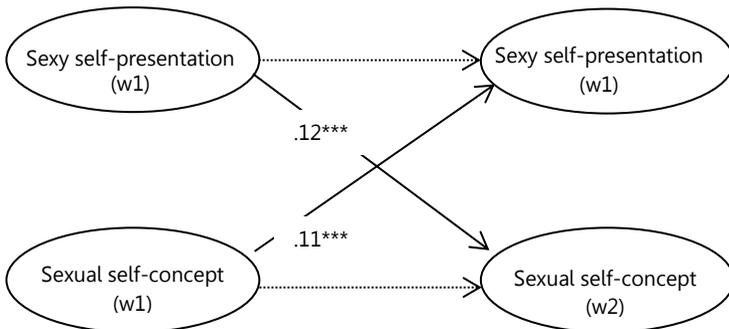


Figure 1.

Standardized estimates of the relationships between sexy self-presentation on SNSs and sexual self-concept; w1 = wave 1; w2 = wave 2

**Table 1.**  
Zero Order Correlations between the Variables

	1	2	3	4	5	6	7	8	9	10
1. SSP (w1)										
2. SSPO (w1)	.38**									
3. Prot. (w1)	.09**	.21**								
4. SSC (w1)	.38**	.24**	.09**							
5. SSP (w2)	.56**	.26**	.08**	.31**						
6. SSPO (w2)	.29**	.61**	.21**	.22**	.36**					
7. Prot. (w2)	.05*	.16**	.45**	.10**	.07**	.21**				
8. SSC (w2)	.32**	.21**	.09**	.56**	.39**	.25**	.13**			
9. Gender	.13**	.08**	-.06*	-.13**	.10**	.03	-.13**	-.13**		
10. Age	.04	.24**	.11**	.01	.05	.18**	.10**	.01	.07**	
11. Sex. Exp. (w1)	.25**	.30**	.11**	.23**	.20**	.26**	.07**	.20**	.02	.43**

*Note.* \*correlation is significant at the 0.05 level (2-tailed); \*\*correlation is significant at the 0.01 level (2-tailed).

SSP = sexy self-presentation; SSPO = sexy self-presentation of others; Prot. = prototypes of sexual peers; SSC = sexual self-concept; Sex. Exp. = sexual experience; w1 = wave 1; w2 = wave 2; w3 = wave 3.

### Indirect Effect of Others' Sexy Self-Presentations through Prototypes of Sexual Others

To investigate the indirect effect of exposure to others' sexy self-presentations on the importance of a sexually outgoing self-concept, through prototypes of sexual others, we analyzed the model that is shown in Figure 2. In this analysis, we controlled for gender, age, and sexual experience and the manifest variable of adolescents' own sexy self-presentation (wave 1). The fit of the model was acceptable,  $\chi^2(298, N = 1,586) = 1296.63$ ,  $p < .001$ , CFI = .98, RMSEA = .046 (90% confidence interval: .04/.05). Our second hypothesis stated that the more adolescents look at sexy self-presentations of others, the more important being

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sexually outgoing becomes for their identity. In line with our hypothesis, exposure to others' sexy self-presentations on SNSs (in wave 1) positively predicted adolescents' sexual self-concept (in wave 2),  $\beta = .08$ ,  $B = .08$ ,  $SE = .02$ ,  $p < .001$  (95% BCI: .03/.13),  $R^2 = .35$ .

Our third hypothesis stated that the more adolescents look at sexy self-presentations of others on SNSs, the more favorable their prototypes of others engaging in sexually outgoing behavior would become (H3a). Having more favorable prototypes of others engaging in sexually outgoing behavior, in turn, would be positively related to how important being sexually outgoing is for adolescents' identity (H3b). We tested this hypothesis with the direct effect between exposure to sexy self-presentations of others and sexy self-concept constrained to zero.

In line with our expectations, looking at sexy self-presentations of others (in wave 1) positively predicted having a favorable prototype of sexual others (in wave 2),  $\beta = .08$ ,  $B = .09$ ,  $SE = .03$ ,  $p = .005$  (95% BCI: .02/.14),  $R^2 = .23$ . Having a positive prototype of sexual others (wave 2) was positively associated with sexual self-concept (wave 2),  $\beta = .07$ ,  $B = .06$ ,  $SE = .02$ ,  $p = .009$  (95% BCI: .02/.12). Moreover, the results showed a statistically significant indirect effect of sexy self-presentations of others (wave 1) on sexual self-concept (wave 2) through prototypes of sexual others (wave 2),  $\beta = .005$ ,  $B = .005$ ,  $SE = .003$ ,  $p = .01$  (95% BCI: .001/.01). Hypotheses 3a and 3b were thus supported.

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### **Selective Exposure and Impression Management**

The models in Figure 1 and Figure 2 were also used to investigate our hypotheses about the selective exposure and selective expression effects. We expected that greater importance of a sexually outgoing self-concept for one's identity would positively predict exposure to sexy self-presentations of others (H4a) and adolescents' own sexy self-presentation (H4b). In line with our hypotheses, adolescents' sexual self-concept (wave 1) predicted exposure to sexy self-presentations of others (wave 2),  $\beta = .06$ ,  $B = .06$ ,  $SE = .02$ ,  $p = .008$ , (95% BCI: .01/.10),  $R^2 = .42$  (see Figure 2), as well as adolescents' own sexy self-presentation (wave 2),  $\beta = .11$ ,  $B = .06$ ,  $SE = .01$ ,  $p < .001$ , (95% BCI .06/.16),  $R^2 = .39$  (see Figure 1).

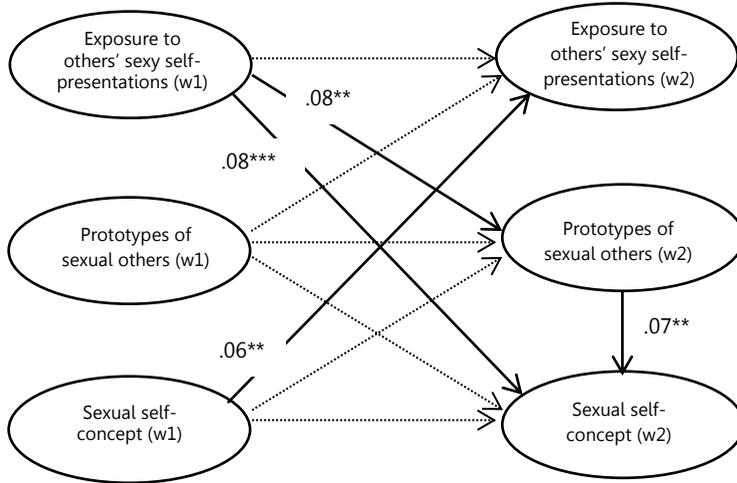


Figure 2. Standardized estimates of the relationships between exposure to others' sexy self-presentations on SNSs and sexual self-concept, as well as the indirect effect of exposure to others' sexy self-presentations on sexual self-concept through prototypes of sexual others; w1 = wave 1; w2 = wave 2

Note. The paths of interest are drawn in bold lines, the other paths in the model are presented with dotted lines for clarity reasons.

### Gender Differences

To explore possible gender differences, we conducted a multiple-group analysis, following recommendations by Rigdon, Schumacker, and Wothke (1998), in which we investigated adolescents' gender as a moderator of the associations between sexy self-presentation and sexual self-concept and exposure to others' sexy self-presentations and sexual self-concept. To investigate RQ1, we analyzed the moderating role of gender in the reciprocal association between sexy self-presentation on SNSs and sexual self-concept. The model comparison of the multiple-group analyses in Figure 1, controlling for age, sexual experience and the manifest variable of exposure to sexy self-presentations of others (wave 1), showed that the prediction of the importance of being sexually outgoing in adolescents' overall identity from sexy self-presentation on SNSs and did not differ between boys and girls,  $\Delta\chi(1, N = 1,586) = .60, p = .44$ . Similarly, the prediction of sexy self-presentation on SNSs from the importance of being sexually outgoing in adolescents' overall identity did not differ by gender,  $\Delta\chi(1, N = 1,586) = .01, p = .91$ .

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To investigate RQ2, we analyzed the moderating role of gender in the reciprocal association between exposure to others' sexy self-presentations on SNSs and sexual self-concept. The model comparison of the multiple-group analyses in Figure 2 showed that the association between looking at others' sexy self-presentations and sexual self-concept was not significantly different for boys and girls,  $\Delta\chi(1, N = 1,586) = .84, p = .36$ , nor was the prediction of exposure to others' sexy self-presentations on SNSs by sexual self-concept,  $\Delta\chi(1, N = 1,586) = .78, p = .38$ . Finally, to investigate RQ3, we tested the moderating role of gender in the indirect effect of exposure to others' sexy self-presentations on SNSs on sexual self-concept through prototypes of sexual others. Model comparisons showed that the association between looking at others' sexy self-presentations and prototypes of sexual peers was similar for boys and girls,  $\Delta\chi(1, N = 1,586) = .00, p = .96$ , as was the association between prototypes of sexual peers and sexual self-concept,  $\Delta\chi(1, N = 1,586) = .11, p = .74$ . In sum, we did not find a moderating role of gender in any of the hypothesized relationships.

### Discussion

72 — The present study aimed to investigate the relationships between both sexy self-presentation on SNSs and exposure to others' sexy self-presentations, and adolescents' sexual self-concept. We found that sexy self-presentation on SNSs predicted changes in adolescents' self-concept over time: The more adolescents engaged in sexy self-presentation on SNSs and the more they looked at others' sexy self-presentations on SNSs, the more important being sexually outgoing (e.g., sexually dressed, tempting, flirtatious and wild) became for their overall identity. In addition, the more adolescents looked at the sexy self-presentations of others, the more favorable their prototypes of peers engaging in sexually outgoing behavior became, which in turn was related to the importance of a sexually outgoing self-concept for adolescents' identity. Thus, the influence of looking at the sexy self-presentations of others on adolescents' sexual self-concept seems to occur partly through the prototypes that adolescents form of sexual others. We also found that when being sexually outgoing was more important for adolescents' identity, they also more frequently presented themselves sexually on SNSs and looked at others' sexy self-presentations over time. Overall, no statistically significant gender differences were found for the hypothesized relationships.

**Implications for Research on Sexy Self-Presentation on SNSs**

Previous qualitative research has suggested that adolescents use sexy self-presentation on SNSs to explore their sexual self-concepts (e.g., Ringrose, 2010, 2011). This study is one of the first to empirically establish longitudinal relationships between adolescents' sexy self-presentation on SNSs, as well as their exposure to sexy self-presentations of others, and their sexual self-concept. Our finding that sexy self-presentation affects adolescents' sexual self-concept is in line with previous research that has applied self-perception theory to computer-mediated communication (e.g., Gonzales & Hancock, 2008; Van Der Heide et al., 2012; Walther et al., 2011). Just as people are more likely to consider themselves as introverted after they present themselves as an introverted person online (Gonzales & Hancock, 2008), adolescents seem more likely to feel that being sexually outgoing is important for who they are when they present themselves in a sexy way online.

These findings extend our knowledge about the consequences of online self-presentations in that they show that self-presentation does not only influence self-evaluations in the form of attitudes or attributes, but also the importance of certain self-concepts for one's overall identity. This also means that research on the short-term effects of self-presentation on self-views may be extended by incorporating long-term effects on adolescents' identity. Moreover, as the importance of self-concepts is a strong motivator of behavior (e.g., Swann et al., 2007), our research has suggested an important underlying mechanism of the association between adolescents' sexy self-presentation and their sexual behavior.

This study also points to processes that may underlie the influence of others' sexy self-presentations on SNSs on the importance of adolescents' sexually outgoing self-concept, namely favorable prototypes of sexual peers. The finding that looking at sexy self-presentations of others influences the favorability of prototypes of peers engaging in casual sexual behavior can have important implications for adolescents' sexual behavior: Favorable prototypes have been shown to be strongly related to the willingness to engage in certain behavior (e.g., Gibbons & Gerrard, 1995). Looking at sexy self-presentations of others on SNSs may thus also influence adolescents' willingness to engage in casual sexual behavior. Such a relationship could be investigated in future research.

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In line with selective exposure theory (e.g., Dillman et al., 2003; Knobloch et al., 2005), we found that when being sexually outgoing was more important for adolescents' identity, they were more likely to look at sexy self-presentations of others on SNSs. This means that research on selective exposure effects can be extended by incorporating adolescents' SNS use, including exposure to sexy self-presentations of others online. In addition, adolescents' sexual self-concept influenced the frequency with which they posted sexy pictures of themselves on SNSs. Several media use theories (e.g., Media Practice Model, Brown, 2000; Steele & Brown, 1995; Reinforcing spiral theory, Slater, 2014; Differential Susceptibility to Media-effects Model, Valkenburg & Peter, 2013), have posited that adolescents' media use and its effects involve a cyclical processes that can lead to a reinforcing spiral of effects.

In a similar vein, adolescents' sexual self-concept can increase their sexy self-presentation on SNSs as well as their exposure to others' sexy self-presentations, which subsequently makes their sexually outgoing self-concept even more important for their identity. Such cyclical processes can have both positive and negative consequences for adolescents' sexuality. On the one hand, the increased importance of a sexual self-concept in adolescents' identity may be problematic when adolescents end up being solely focused on their sexual self-concept, especially when this occurs at the expense of other self-concepts, such as their academic self-concept (e.g., Zurbriggen et al., 2010). At the same time, having a sexual self-concept that is strongly linked to one's overall identity could also encompass having high sexual self-esteem and agency, which can be considered positive developments in the lives adolescents (Lerum & Dworkin, 2009). Although the two-wave design of the present study could not establish such positive or negative reinforcing spirals, this may be an important avenue for future research.

Whereas previous research found differences in SNSs use between boys and girls (e.g., Barker, 2009; Pempek et al., 2009; Rui & Stefanone, 2013), we did not find any gender differences in the relationships between self- or other-generated sexy self-presentations on SNSs and adolescents' sexual self-concept. This finding also seems to be in contrast with previous research that has suggested that girls use SNSs more for their sexual identity exploration (Ringrose, 2010, 2011; Ringrose & Eriksson Barajas, 2011). It seems that even though SNS use may differ between boys and girls, once they start to use these

platforms for sexual exploration the effects of this type of sexual media use on their sexual self-concept are uniform. Future research on gender differences in adolescents' online behavior should therefore distinguish between the *use* of SNSs and the *impact* of such use, at least as far as it concerns the impact on adolescents' sexuality. Moreover, whether adolescents' sexuality is influenced by SNS use may depend on other dispositions than gender. It remains to be investigated exactly what kind of dispositions can play a role here.

With regard to selective exposure effects, previous research has found that sexual attitudes predict selective exposure to sexually explicit material mostly for boys (e.g., Peter & Valkenburg, 2009). However, in the present study boys' and girls' sexual self-concept predicted their sexy self-presentation and exposure to others' sexy self-presentations in similar ways. It could be that the taboos that surround the use of more explicit sexual content for girls (e.g., Cameron et al., 2005; Häggström-Nordin, Tydén, Hanson, & Larsson, 2009; Lofgren-Mårtenson & Månsson, 2010) are absent for the use of sexual content on SNSs. This may be because the sexual content on SNSs is not explicit and because it is produced by their peers or by adolescents themselves, and is therefore considered "normal." The absence of taboos, in turn, may result in more selective exposure to – or even selective expression of – such content among girls compared to more sexually explicit content. This topic awaits future research.

### **Limitations and Conclusions**

One limitation of the present study concerns the fact that, with our longitudinal survey design, we could not establish the same internal validity of our causal relationships as we could with an experimental design. In order to show rigorously that exposure to, or the producing of, sexy self-presentations causes changes in adolescents' sexual self-concept, experimental research would be needed in which adolescents' sexy self-presentation is manipulated. Similarly, in order to see whether sexual self-concept causes selective exposure to sexy content or impression management on SNSs, the importance of being sexually outgoing for adolescents' overall identity would have to be manipulated, or pre-established groups of adolescents with different sexual self-concepts would have to be recruited. However, manipulating and measuring sexy self-presentations among adolescents in an experiment may be difficult and not in line with ethical research guidelines. Also, it seems questionable whether someone's sexual self-concept can be manipulated. Such experimental designs

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would thus be problematic and reduce the external validity of the study. The longitudinal design of the present study can therefore be considered the best solution for empirically establishing directionality in the relationships between sexy self-presentations on SNSs and adolescents' sexual self-concept in an externally valid way.

Another limitation is that we only investigated one type of sexual self-concept. We chose to focus on a sexually outgoing self-concept because this was most likely to be influenced by adolescents' sexually outgoing behavior on social network sites. However, previous research has established several other sexual self-concepts, including conservative and reserved sexual self-concepts, as well as more sexually adventurous and romantic self-concepts (e.g., Andersen & Cyranowski, 1994, 1999; Buzwell & Rosenthal, 1996). More research is needed on how sexy online self-presentation is related to other types of sexual self-concepts to obtain a more complete picture of the associations between sexy self-presentations and adolescents' sexual self-concepts.

76 — A final limitation concerns the measure of prototypes of sexual others. In our measure, the prototype of a sexually outgoing peer was rather extreme for adolescents (i.e., a peer engaging in casual sexual contacts). This may explain the weak indirect effect we found for favorability of prototypes of sexual others. Perhaps a different prototype measure, for instance of a peer engaging in flirtatious behavior, would have better explained the relationship between exposure to sexy self-presentations of others and adolescents' sexual self-concept.

In sum, this study is one of the first to show that adolescents' SNS use, and their sexy self-presentations in particular, affects their sexual self-concepts. Although this field of research is still in its infancy, these findings suggest that adolescents' sexy self-presentation and its effect on their sexual self-concepts is a fruitful avenue for future research. More specifically, this study showed that SNS use may be a relevant contributor to adolescents' sexual self-concepts and identity, and calls for further investigations of adolescents' SNS use, their sexy self-presentations, and sexual behavior.

## References

- Andersen, B., & Cyranowski, J. (1994). Women's sexual self-schema. *Journal of Personality and Social Psychology, 67*, 1079–1100. doi:10.1037//0022-3514.67.6.1079
- Andersen, B., Cyranowski, J., & Espindle, D. (1999). Men's sexual self-schema. *Journal of Personality and Social Psychology, 76*, 645–661. doi:10.1037//0022-3514.76.4.645
- Aquino, K., & Reed, A. I. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology, 83*, 1423–1440. doi:10.1037//0022-3514.83.6.1423
- Bailey, J., Steeves, V., Burkell, J., & Regan, P. (2013). Negotiating with gender stereotypes on social networking sites: From “bicycle face” to Facebook. *Journal of Communication Inquiry, 37*, 91–112. doi:10.1177/0196859912473777
- Barker, V. (2009). Older adolescents' motivations for social network site use: The influence of gender, group identity, and collective self-esteem. *Cyberpsychology & Behavior, 12*, 209–213. doi:10.1089/cpb.2008.0228
- Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology, 6* (pp. 1–62). doi:10.1016/S0065-2601(08)60024-6
- Bobkowski, P. S., Brown, J. D., & Neffa, D. R. (2012). “Hit me up and we can get down.” *Journal of Children and Media, 6*, 119–134. doi:10.1080/17482798.2011.633412
- boyd, D. (2007). Why youth (heart) social network sites: The role of networked publics in teenage social life. In D. Buckingham (Ed.), *MacArthur Foundation Series on Digital Learning – Youth, Identity, and Digital Media Volume* (pp. 1–26). Cambridge, MA: MIT Press.
- Breakwell, G. M., & Millward, L. J. (1997). Sexual self-concept and sexual risk-taking. *Journal of Adolescence, 20*, 29–41. doi:10.1006/jado.1996.0062
- Brechwald, W. A., & Prinstein, M. J. (2011). Beyond homophily: A decade of advances in understanding peer influence processes. *Journal of Research on Adolescence, 21*, 166–179. doi:10.1111/j.1532-7795.2010.00721.x
- Brown, J. D. (2000). Adolescents' sexual media diets. *Journal of Adolescent Health, 27*, 35–40. doi: 10.1016/S1054-139X(00)00141-5
- Buzwell, S., & Rosenthal, D. (1996). Constructing a sexual self: Adolescents' sexual self-perceptions and sexual risk-taking. *Journal of Research on Adolescence, 6*, 489–513.
- Cameron, K. A., Salazar, L. F., Bernhardt, J. M., Burgess-Whitman, N., Wingood, G. M., & DiClemente, R. J. (2005). Adolescents' experience with sex on the web: results from online focus groups. *Journal of Adolescence, 28*, 535–40. doi:10.1016/j.adolescence.2004.10.006
- Cassidy, C., & Trew, K. (2001). Assessing identity change: A longitudinal study of the transition from school to college. *Group Processes & Intergroup Relations, 4*, 49–60. doi:10.1177/1368430201041004
- Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology, 112*, 558–77. doi:10.1037/0021-843X.112.4.558

## CHAPTER 3

- Collins, R., Martino, S., & Shaw, R. (2011). Influence of new media on adolescent sexual health: Evidence and opportunities. *RAND Corporation*. Retrieved from: [http://www.rand.org/pubs/working\\_papers/WR761.html](http://www.rand.org/pubs/working_papers/WR761.html).
- Crescenzi, L., Araña, N., & Tortajada, I. (2013). Privacy, self-disclosure and self-image of Spanish teenagers on social networking sites. The case of Fotolog. *Communication & Society, 26*, 65–78.
- Dal Cin, S., Worth, K. A., Gerrard, M., Stoolmiller, M., Sargent, J. D., Wills, T. A., & Gibbons, F. X. (2009). Watching and drinking: Expectancies, prototypes, and friends' alcohol use mediate the effect of exposure to alcohol use in movies on adolescent drinking. *Health Psychology, 28*, 473–83. doi:10.1037/a0014777
- Dillman Carpentier, F., Knobloch, S., & Zillmann, D. (2003). Rock, rap, and rebellion: Comparisons of traits predicting selective exposure to defiant music. *Personality and Individual Differences, 35*, 1643–1655. doi:10.1016/S0191-8869(02)00387-2
- Efron, B., & Tibshirani, R. J. (1993). *An introduction to the bootstrap*. Boca Raton, FL: Chapman & Hall.
- Fox, J., Bailenson, J. N., & Tricase, L. (2013). The embodiment of sexualized virtual selves: The Proteus effect and experiences of self-objectification via avatars. *Computers in Human Behavior, 29*, 930–938. doi:10.1016/j.chb.2012.12.027
- Gerrard, M., Gibbons, F. X., Houlihan, A. E., Stock, M. L., & Pomery, E. A. (2008). A dual-process approach to health risk decision making: The prototype willingness model. *Developmental Review, 28*, 29–61. doi:10.1016/j.dr.2007.10.001
- Gibbons, F. X., & Gerrard, M. (1995). Predicting young adults' health risk behavior. *Journal of Personality and Social Psychology, 69*, 505–517. doi:10.1037//0022-3514.69.3.505
- Gibbons, F. X., Gerrard, M., & McCoy, S. B. (1995). Prototype perception predicts (lack of) pregnancy prevention. *Personality and Social Psychology Bulletin, 21*, 85–93. doi:10.1177/0146167295211009
- Gibbons, F. X., Pomery, E. A., Gerrard, M., Sargent, J. D., Weng, C. Y., Wills, T. A., ... Yeh, H.-C. (2010). Media as social influence: Racial differences in the effects of peers and media on adolescent alcohol cognitions and consumption. *Psychology of Addictive Behaviors, 24*, 649–659. doi:10.1037/a0020768
- Gonzales, A. L., & Hancock, J. T. (2008). Identity shift in computer-mediated environments. *Media Psychology, 11*, 167–185. doi:10.1080/15213260802023433
- Gonzales, A. L., & Hancock, J. T. (2010). Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem. *Cyberpsychology, Behavior and Social Networking, 14*, 79–83. doi:10.1089/cyber.2009.0411
- Gross, E. F. (2004). Adolescent Internet use: What we expect, what teens report. *Journal of Applied Developmental Psychology, 25*, 633–649. doi:10.1016/j.appdev.2004.09.005
- Guttman, L. (1945). A basis for analyzing test-retest reliability. *Psychometrika, 10*, 255–282. doi:10.1007/BF02288892
- Haferkamp, N., & Krämer, N. C. (2011). Social comparison 2.0: Examining the effects of online profiles on social-networking sites. *Cyberpsychology, Behavior and Social Networking, 14*, 309–14. doi:10.1089/cyber.2010.0120

- Häggröm-Nordin, E., Tydén, T., Hanson, U., & Larsson, M. (2009). Experiences of and attitudes towards pornography among a group of Swedish high school students. *The European Journal of Contraception & Reproductive Health Care, 14*, 277–84. doi:10.1080/13625180903028171
- Hall, P. C., West, J. H., & McIntyre, E. (2012). Female self-sexualization in MySpace.com personal profile photographs. *Sexuality & Culture, 16*, 1–16. doi:10.1007/s12119-011-9095-0
- Harter, S., Bresnick, S., Bouchev, H. A., & Whitesell, N. R. (1997). The development of multiple role-related selves during adolescence. *Development and Psychopathology, 9*, 835–53.
- Hensel, D. J., Fortenberry, J. D., O'Sullivan, L. F., & Orr, D. P. (2011). The developmental association of sexual self-concept with sexual behavior among adolescent women. *Journal of Adolescence, 34*, 675–684. doi:10.1016/j.adolescence.2010.09.005
- Houlihan, A. E., Gibbons, F. X., Gerrard, M., Yeh, H.-C., Reimer, R. A., & Murry, V. M. (2008). Sex and the self: The impact of early sexual onset on the self-concept and subsequent risky behavior of African American adolescents. *The Journal of Early Adolescence, 28*, 70–91. doi:10.1177/0272431607308670
- Jones, E. E., Rhodewalt, F., Berglas, S., & Skelton, J. A. (1981). Effects of strategic self-presentation on subsequent self-esteem. *Journal of Personality and Social Psychology, 41*, 407–421. doi:10.1037//0022-3514.41.3.407
- Kapidzic, S., & Herring, S. C. (2014). Race, gender, and self-presentation in teen profile photographs. *New Media & Society, 1*–19. doi:10.1177/1461444813520301
- Kelly, A., & Rodriguez, R. (2006). Publicly committing oneself to an identity. *Basic and Applied Social Psychology, 28*, 185–191. doi:10.1207/s15324834basp2802
- Knobloch, B. S., Callison, C., Chen, L., Fritzsche, A., & Zillmann, D. (2005). Children's sex-stereotyped self-socialization through selective exposure to entertainment: Cross-cultural experiments in Germany, China, and the United States. *Journal of Communication, 55*, 122–138. doi:10.1111/j.1460-2466.2005.tb02662.x
- Krämer, N. C., & Haferkamp, N. (2011). Online self-presentation: Balancing privacy concerns and impression construction on social networking sites. In S. Trepte & L. Reinecke (Eds.), *Privacy online: Perspectives on privacy and self-disclosure in the social web* (pp. 127–141). Heidelberg, Germany: Springer. doi:10.1007/978-3-642-21521-6
- Leary, M., & Kowalski, R. (1990). Impression management: A literature review and two-component model. *Psychological Bulletin, 107*, 34–47.
- Lee, A. E., Sadowski, R., Cheek, B., & Cheek, J. M. (1991). Sensation seeking correlates more strongly than self-monitoring with sociosexual orientation. *Paper presented at the annual meeting of the American Psychological Society, Washington, DC.*
- Lenhart, A., & Madden, M. (2007). *Social networking websites and teens: An overview*. Retrieved from [http://htlab.psy.unipd.it/uploads/Pdf/lectures/technology\\_for\\_young/Social\\_Networking\\_Websites\\_and\\_Teens\\_text.pdf](http://htlab.psy.unipd.it/uploads/Pdf/lectures/technology_for_young/Social_Networking_Websites_and_Teens_text.pdf)

- Lerum, K., & Dworkin, S. L. (2009). "Bad girls rule": An interdisciplinary feminist commentary on the report of the APA Task Force on the Sexualization of Girls. *Journal of Sex Research, 46*, 250–263. doi:10.1080/00224490903079542
- Livingstone, S. (2008). Taking risky opportunities in youthful content creation: Teenagers' use of social networking sites for intimacy, privacy and self-expression. *New Media & Society, 10*, 393–411. doi:10.1177/1461444808089415
- Livingstone, S., & Brake, D. R. (2010). On the rapid rise of social networking sites: New findings and policy implications. *Children & Society, 24*, 75–83. doi:10.1111/j.1099-0860.2009.00243.x
- Lofgren-Mårtenson, L., & Månsson, S.-A. (2010). Lust, love, and life: A qualitative study of Swedish adolescents' perceptions and experiences with pornography. *Journal of Sex Research, 47*, 568–79. doi:10.1080/00224490903151374
- Manago, A. M., Graham, M. B., Greenfield, P. M., & Salimkhan, G. (2008). Self-presentation and gender on MySpace. *Journal of Applied Developmental Psychology, 29*, 446–458. doi:10.1016/j.appdev.2008.07.001
- McAndrew, F., & Jeong, H. (2012). Who does what on Facebook? Age, sex, and relationship status as predictors of Facebook use. *Computers in Human Behavior, 28*, 2359–2365. doi:10.1016/j.chb.2012.07.007
- Mustanski, B. S. (2001). Getting wired: Exploiting the internet for the collection of sexually valid data. *Journal of Sex Research, 38*, 292–301. doi:10.1080/00224490109552100
- Oliver, M. B., & Krakowiak, K. M. (2009). Individual differences in media effects. In J. Bryant & M. B. Oliver (Eds.), *Media effects: Advances in theory and research* (pp. 517–531). New York, NY: Routledge.
- Peluchette, J., & Karl, K. (2009). Examining students' intended image on Facebook: What were they thinking?!. *Journal of Education for Business, 85*, 30–37. doi:10.1080/08832320903217606
- Pempek, T. A., Yermolayeva, Y. A., & Calvert, S. L. (2009). College students' social networking experiences on Facebook. *Journal of Applied Developmental Psychology, 30*, 227–238. doi:10.1016/j.appdev.2008.12.010
- Peter, J., & Valkenburg, P. M. (2009). Adolescents' exposure to sexually explicit Internet material and notions of women as sex objects: Assessing causality and underlying processes. *Journal of Communication, 59*, 407–433. doi:10.1111/j.1460-2466.2009.01422.x
- Rigdon, E. E., Schumacker, R. E., & Wothke, W. (1998). A comparative review of interaction and nonlinear modeling. In R. E. Schumacker & G. A. Marcoulides (Eds.), *Interaction and nonlinear effects in structural equation modeling* (pp. 1–16). Mahwah, NJ: Erlbaum.
- Ringrose, J. (2010). Sluts, whores, fat slags and playboy bunnies: Teen girls' negotiations of "sexy" on social networking sites and at school. In C. Jackson, C. Paechte, & E. Renold (Eds.), *Girls and education 3–16: Continuing concerns, new agendas*. Basingstoke, UK: Open University Press.

- Ringrose, J. (2011). Are you sexy, flirty or a slut? Exploring “sexualization” and how teen girls perform/negotiate digital sexual identity on social networking sites. In R. Gill & C. Scharff (Eds.), *New femininities: Postfeminism, neoliberalism and subjectivity* (pp. 99–116). London, UK: Palgrave.
- Ringrose, J., & Eriksson Barajas, K. (2011). Gendered risks and opportunities? Exploring teen girls’ digitised sexual identities in postfeminist media contexts. *International Journal of Media and Cultural Politics*, 7, 121–138. doi:10.1386/macp.7.2.121\_1
- Rui, J. R., & Stefanone, M. A. (2013). Strategic image management online. *Information, Communication & Society*, 16, 1286–1305. doi:10.1080/1369118X.2013.763834
- Schlenker, B. R., Dlugolecki, D. W., & Doherty, K. (1994). The impact of self-presentations on self-appraisals and behavior: The power of public commitment. *Personality and Social Psychology Bulletin*, 20, 20–33. doi:10.1177/0146167294201002
- Shafer, A., Bobkowski, P., & Brown, J. D. (2013). Sexual media practice: How adolescents select, engage with, and are affected by sexual media. In K. E. Dill (Ed.), *The Oxford handbook of media psychology* (pp. 223–251). New York, NY: Oxford University Press.
- Shapka, J., & Keating, D. (2005). Structure and change in self-concept during adolescence. *Canadian Journal of Behavioural Science*, 37, 83–96. doi:10.1037/h0087247
- Sütbak, A. (2009). Constructing the self through the photo selection-visual impression management on social networking websites. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 3, article 1. Retrieved from <http://www.cyberpsychology.eu/view.php?cisloclanku=2009061501&article=1>
- Simpson, J. A., & Gangestad, S. W. (1991). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology*, 60, 870–883. doi:10.1037//0022-3514.60.6.870
- Slater, M. D. (2014). Reinforcing spirals model: Conceptualizing the relationship between media content exposure and the development and maintenance of attitudes. *Media Psychology*, 1–26. doi:10.1080/15213269.2014.897236
- Steele, J. R., & Brown, J. D. (1995). Adolescent room culture: Studying media in the context of everyday life. *Journal of Youth and Adolescence*, 24, 551–576. doi:10.1007/BF01537056
- Steinberg, L. (2008). *Adolescence* (8th ed.). Boston, MA: McGraw Hill.
- Swann, W. B., Chang-Schneider, C., & Larsen McClarty, K. (2007). Do people’s self-views matter? Self-concept and self-esteem in everyday life. *The American Psychologist*, 62, 84–94. doi:10.1037/0003-066X.62.2.84
- Tang, W., & Cui, Y. (2012). A simulation study for comparing three lower bounds to reliability. In *Paper presented on April 17, 2012 at the AERA Division D: Measurement and Research Methodology, Section 1: Educational Measurement, Psychometrics, and Assessment*. (pp. 1–25).

## CHAPTER 3

- Toma, C. L., & Hancock, J. T. (2010). Looks and lies: The role of physical attractiveness in online dating self-presentation and deception. *Communication Research, 37*, 335–351. doi:10.1177/0093650209356437
- Tortajada-Giménez, I., Araüna-Baró, N., & Martínez-Martínez, I. J. (2013). Advertising stereotypes and gender representation in social networking sites. *Comunicar, 21*, 177–186. doi:10.3916/C41-2013-17
- Valkenburg, P. M., & Peter, J. (2013). The differential susceptibility to media effects model. *Journal of Communication, 63*, 221–243. doi:10.1111/jcom.12024
- Van Der Heide, B., Schumaker, E. M., Peterson, A. M., & Jones, E. B. (2012). The Proteus effect in dyadic communication: Examining the effect of avatar appearance in computer-mediated dyadic interaction. *Communication Research, 40*, 838–860. doi:10.1177/0093650212438097
- Walther, J. B., Liang, Y. J., DeAndrea, D. C., Tong, S. T., Carr, C. T., Spottswood, E. L., & Amichai-Hamburger, Y. (2011). The effect of feedback on identity shift in computer-mediated communication. *Media Psychology, 14*, 1–26. doi:10.1080/15213269.2010.547832
- Young, K. (2009). Online social networking: An Australian perspective. *International Journal of Emerging Technologies and Society, 7*, 39–57.
- Young, K. (2013). Managing online identity and diverse social networks on Facebook. *Webology, 10*, 1–18.
- Zurbriggen, E., Collins, R., Lamb, S., Roberts, T., Tolman, D., Ward, L., & Blake, J. (2010). Report of the APA Task Force on the Sexualization of Girls. *American Psychological Association*. Retrieved from <http://www.apa.org/pi/women/programs/girls/report-full.pdf>

## Notes

<sup>1</sup> We presented respondents ( $N = 58$ , mean age = 28.33,  $SD = 7.80$ , 45% male) with a list of 19 traits that could describe a sexual person (i.e., 'dressed sexy', 'extraverted', 'enjoying life', 'free', 'hot', 'independent', 'passionate', 'pretty', 'self-confident', 'relaxed', 'nice body', 'spontaneous', 'you only live once', 'mature', 'outgoing', 'flirtatious', 'popular', 'tempting' and 'wild'), as well as 23 filler items. Respondents had to indicate to what extent each trait was typical of a sexual person, on a scale from 1 (*not at all typical*) to 5 (*very typical*). We conducted a principal component analysis with varimax rotation on the 19 sexual items, which resulted in four factors. Upon inspection, we removed four items ('enjoying life', 'extraverted', 'you only live once' and 'mature') because they did not cluster with the two main factors. A principal component analysis with varimax rotation on the remaining 15 sexual items resulted in two factors. One factor contained the highest face validity to describe a sexually outgoing person. This factor explained 25% of variance, and consisted of the traits 'dressed sexy' ( $M = 3.62$ ,  $SD = .91$ ), 'outgoing' ( $M = 3.86$ ,  $SD = .69$ ), 'flirtatious' ( $M = 4.21$ ,  $SD = .81$ ), 'popular' ( $M = 3.30$ ,  $SD = 1.09$ ), 'tempting' ( $M = 4.09$ ,  $SD = .66$ ) and 'wild' ( $M = 3.63$ ,  $SD = .99$ ).