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

van Oosten, J.M.F.

Publication date
2015

Document Version
Final published version

Citation for published version (APA):

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: https://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
Chapter 1

INTRODUCTION AND DISSERTATION OUTLINE
“Talk to your child about sex, before the internet does.”

This is the slogan of a campaign by SIRE (Stichting Ideële Reclame [Organization Idealistic Advertisement]) launched in May 2014. The campaign aimed to warn parents about the unrealistic sexually explicit content that their children may encounter - deliberately or not- on the internet. The SIRE campaign is one of the first public campaigns targeted at the online availability of sexually explicit material (i.e., the explicit, unconcealed depiction of [aroused] genitals and sexual activities, such as oral sex and anal or vaginal penetration, Peter & Valkenburg, 2009). However, concerns that young viewers encounter content in the media that they are not able to distinguish from reality are not confined to sexually explicit internet material. Similar concerns have been voiced also about less explicit, but nonetheless unrealistic, sexual content in more mainstream media such as music videos (e.g., Aubrey & Frisby, 2011; Hilkens, 2008; Kistler & Lee, 2010). For example, in a highly publicized case, rap and hiphop culture and its sexually stereotypical music videos in particular, were said to have inspired 13-year old teenagers to engage in sexual assault (Hilkens, 2008). As a result, politicians and other critical voices from society requested that young people are taught to put sexual media content in perspective (Ministerie voor Onderwijs, Cultuur en Wetenschap, 2008; Hilkens, 2008). To know whether such requests are warranted and how they can be addressed, however, we first need to understand whether and how sexual media content affects young people, which young people are affected most and which are not. This dissertation aims to contribute to this understanding.

In line with public concerns, it has been acknowledged in the literature that the media have become sexualized (e.g., Attwood, 2009; Brown & Bobkowski, 2011). Sexualization of the media can be defined by three developments. First, images that were considered pornographic several decades ago (i.e., images of nudity and suggestive of sexual activity and situations) have become part of mainstream television and media content such as movies, music, and music videos (Attwood, 2009; Callister, Stern, Coyne, Robinson, & Bennion, 2011; Månsson, Löfgren-Mårtenson, & Knudsen, 2007). Content analyses have shown that more than two-thirds of all television programs include talk about sex, and more than one-third include sexual behavior (e.g., Kunkel, Eyal, Finnerty, Biely, & Donnerstein, 2005). Interestingly, the portrayal of sexual content is higher in
television programs with teenage characters (i.e., in about 90% of such programs, Aubrey, 2004). Similarly, a more recent content analysis of British soap-operas, a media genre that is very popular among young viewers, has shown that 79% of the 139 analyzed episodes contained some form of sexual content (Al-Sayed & Gunter, 2012). Similar to earlier research (Kunkel et al., 2005), sexual talk occurred more frequently than sexual behavior (62% of all scenes for the first, and 38% of all scenes for the latter, Al-Sayed & Gunter, 2012). Content analyses have also demonstrated that more than half of music videos on music television channels contain some kind of sexual content (for an overview, see Wright, 2009). This percentage is even higher – about 80% – for music videos of the rap and R&B genres (e.g., Aubrey & Frisby, 2011; Turner, 2011).

A second development that characterizes the sexualization of the media is the increasing availability of adult oriented sexual media content, such as pornography, for young people as a result of the rise of digital technologies and the internet. Adolescents use the internet more than any other age group (SPOT, 2012). According to a US-based survey, about 93% of boys and 62% of girls have encountered sexually explicit material on the internet before the age of 18 (Sabina, Wolak, & Finkelhor, 2008). Moreover, in a representative US survey, 34% of adolescents between the ages of 13-17 reported that they had deliberately watched sexually explicit internet material (Wolak, Mitchell, & Finkelhor, 2007). Similar prevalence rates have been found in Europe. For instance, more than 90% of Scandinavian teenagers have encountered sexually explicit content at least once, and about one-third of adolescents are frequent consumers (Sørensen & Kjørholt, 2007). Similarly, in a Dutch sample, 20% of adolescents indicated that they had deliberately watched video material depicting sexual interactions, and 32% had looked at pictures portraying sex (Peter & Valkenburg, 2011). Another Dutch study showed that 20 to 28% of children aged 8 to 17 had deliberately seen pictures or movie fragments in which genitals and sexual behavior were shown (Kerstens & De Graaf, 2012).

A third, and more recent, development that defines the sexualization of young people’s media environment is the dramatic rise of digital applications on the internet in the past years, notably the rise of social network sites. The use of social network sites, such as Facebook and Instagram, has become the most
popular computer activity of adolescents (CBS, 2013; Rideout, Foehr, & Roberts, 2010), increasing the time that 8- to 18-year-olds spend on a computer in a typical day by almost a half hour over the past decade (Rideout et al., 2010). A large majority of adolescents – about 80% – indicate that they have visited social network sites in the previous month (Lobe, Livingstone, Ólafsson, & Vodeb, 2011). While young people use social network sites predominantly to share non-sexual information with their friends (e.g., Barker, 2009; Gross, 2004; Lenhart & Madden, 2007), they do also post sexual information on social network sites. For instance, about a quarter of the profiles on the social network site MySpace contain sexual references (Moreno, Parks, Zimmerman, Brito, & Christakis, 2009). The most obvious type of sexual reference occurs in the form of sexy self-presentations, which refers to posting sexually suggestive pictures (i.e., semi-nude or sexually provocative pictures, Peluchette & Karl, 2009; pictures in swimsuits or underwear, Hinduja & Patchin, 2008) of oneself on one’s social network site profile.

Against the backdrop of adolescents’ sexualized media environment, it is not surprising that there has been a growing interest in whether and how sexual media content influences young people. Young people form the center of this interest because they are considered to be particularly susceptible to influences of such a sexualized media environment. Two reasons are usually mentioned. First, adolescents spend more time with media than they do with any other activity besides going to school and sleeping (Rideout et al., 2010). Second, adolescence is a period of sexual exploration and developing a sexual self (i.e., adolescents’ sense of how they see themselves as a sexual person, e.g., Breakwell & Millward, 1997; Buzwell & Rosenthal, 1996). It is a period in which beliefs about sex and sexuality (e.g., when to have sex, with whom and how one should behave when it comes to sex and relationships) are developing (Gruber & Grube, 2000). In this development, sexual media content is often used as a source of information (Brown & Bobkowski, 2011; Shafer, Bobkowski, & Brown, 2013; Wright, 2009). About one-third of adolescents have mentioned sexual media content as their primary source of sexual information (Bleakley, Hennessy, Fishbein, & Jordan, 2009). Accordingly, the use of sexual media content for information about sexual practice and understanding of body and gender has partly become a supplement to sex education taught in schools (Hammarén & Johansson, 2007).
 CHAPTER 1

Given the sexualization of the media adolescents use, as well as adolescents’ age-related interest in sexual media content, considerable research attention has been paid to an influence of such content on adolescents’ sexuality. This research has greatly advanced our knowledge about the relation between sexual media content and adolescents’ sexual beliefs, attitudes, and their sexual behavior (for reviews see Nikken, 2009; Owens, Behun, Manning, & Reid, 2012; Peter, 2013; Shafer et al., 2013). However, despite the amount of knowledge that this research has accumulated, there are at least four omissions in the literature that need attention and that will be addressed in this dissertation. First, existing research has largely neglected the effects of sexual content generated by young people themselves on social network sites. Second, we know little about which types of adolescents are particularly susceptible to the effects of sexual media content. Third, there is a lack of research on the role of response states that young people experience when they are exposed to sexual media content. Fourth and finally, there are outcome variables that have not received much attention in the literature, which are however particularly relevant given the specific stereotypical portrayals in the majority of sexual media content (i.e., misogynist beliefs about female sexual behavior), or given the characteristic developmental tasks of adolescence (i.e., the development of a sexual self). This dissertation will touch upon each of these four shortcomings and therefore contribute to answering the question of whether, how and for which adolescents sexual media content has an effect.

What Are the Effects of User-Generated Sexual Content on Social Media?

To date, most research has focused on sexual media content in traditional media outlets (Wright, 2009). For instance, there has been a substantial amount of research on the effects of sexually explicit internet material (for an overview, see Owens et al., 2012) and more mainstream sexual content, such as sexual content on television and in music videos (for overviews, see Nikken, 2009; Shafer et al., 2013). It thus seems that recent developments in adolescents’ use of digital media, and social network sites in particular, are being overlooked. This lack of research is striking given the immense popularity of social network sites among young people (CBS, 2013; Lenhart, Purcell, Smith, & Zickuhr, 2010; Lobe et al., 2011; Rideout et al., 2010) and the amount of sexual content that is posted on these sites (e.g., Hall, West, & McIntyre, 2012; Moreno et al., 2009; Peluchette & Karl, 2009).
It is not unlikely that adolescents are also influenced by the user-generated sexual content on social network sites, in addition to the sexual content in more traditional media genres. For instance, media-effects theories, such as Social Cognitive Theory (Bandura, 2001), generally posit that adolescents learn from the specific content that they use. This implies that adolescents also learn from the sexual content on social network sites. In addition, peers have been considered important in the sharing and interpreting of sexual content, and thus for the occurrence of its effects (e.g., Media Practice Model, Steele & Brown, 1995; Steele, 1999). Since adolescents use social network sites mostly to interact with their peers (Barker, 2009; Gross, 2004; Lenhart & Madden, 2007), this also makes it likely that adolescents are influenced by the sexual content generated by their peers on social network sites.

In addition, social network sites may be a suitable tool for adolescents’ sexual development, even more so than traditional media genres, given its utility for self-expression and self-disclosure (e.g., Valkenburg & Peter, 2011). For instance, adolescents have been shown to use online communication to rehearse offline social skills (Valkenburg, Sumter, & Peter, 2011) and to form relationships (Koutamanis, Vossen, Peter, & Valkenburg, 2013). Similarly, sexual self-disclosure or self-presentation may be used by adolescents to develop their sexual self and to explore sexual behavior (Collins, Martino, & Shaw, 2011; Shafer et al., 2013). However, associations between sexual content on new media platforms, such as social network sites, and adolescents’ sexuality have hardly been studied (Collins et al., 2011). I therefore aimed to study a broader scope of adolescents’ sexual media use, by focusing on the effects of sexy self-presentations on social network sites (Chapters 2 and 3), in addition to the effects of more “traditional” types of sexual media content such as sexual music videos (Chapter 4) and sexually explicit material (Chapters 5 and 6).

**Who is Susceptible to the Effects of Sexual Media Content?**

Research on which types of adolescents are particularly susceptible to the effects of sexual media content is still scarce (e.g., Brown & Bobkowski, 2011; Owens et al., 2012). Currently, research on sexual media-effects is mainly focused on whether sexual media content has a “positive” or “negative” influence on adolescents, instead of trying to understand under which conditions it produces which type of effect – or none at all (Lerum & Dworkin,
This focus in current research is striking because several models have specifically theorized individual susceptibility to media-effects. For instance, the Media Practice Model (Steele, 1999; Steele & Brown, 1995) posits that effects of (sexual) media content depend on how media are used in the context of adolescents’ social environment and their experiences in “real life.” Similarly, according to the Confluence Model (Kingston, Malamuth, Fedoroff, & Marshall, 2009; Malamuth, Addison, & Koss, 2000; Malamuth, Hald, & Koss, 2012), congruency between the media content and viewers’ sexually stereotypical beliefs can explain differential effects of sexually aggressive media content. Recently, a Differential Susceptibility to Media-effects Model (DSMM, Valkenburg & Peter, 2013) has been developed, which posits among other things that media-effects depend on the congruency between media content and developmental, social, and dispositional characteristics of viewers.

Despite these theoretical developments, research on individual susceptibility to the effects of sexual media use among young people is scarce. Studies that have taken adolescents’ individual susceptibility to sexual media-effects into account have mainly focused on gender. However, research has often failed to find gender differences in the effects of sexual media content (Valkenburg, 2014) or such gender differences have been inconsistent. For instance, the influence of sexually explicit material has often been the same for boys and girls (for an overview, see Owens et al., 2012). In contrast, the influence of more mainstream sexual content, such as music videos, has been found to differ by gender (e.g., Cobb & Boettcher, 2007; Johnson, Adams, Ashburn, & Reed, 1995; Kistler & Lee, 2010), albeit in inconsistent ways. This suggests that other susceptibility characteristics than gender may be at play. However, research that has focused on other susceptibility variables has mainly been conducted among adults (e.g., Malamuth et al., 2000, 2012). Therefore, the second aim of this dissertation is to identity groups of adolescents who are more or less susceptible to the effects of sexual media content. In addition to looking at the moderating role of gender (Chapters 2, 3, and 4) and age (Chapter 2), I also investigated within-gender differences in sexual dispositions (i.e., beliefs and values regarding sex) as susceptibility variables, based on the congruency between the specific stereotypical sexual content and such dispositions (Chapters 5 and 6).
Investigating the Role of Response States

Existing research on the effects of sexual media content on adolescent sexuality has paid little attention to the role of response states in such effects. In scientific discussions about the influence of sexual media use, the way that people respond to sexual media content has been deemed to play an important role (Bragg & Buckingham, 2009; Linz & Malamuth, 1993). For example, it has often been argued that young viewers do not passively adopt everything they see, but that their active response states during media use determine whether or not media content has an influence on them (e.g., Bragg & Buckingham, 2009; Shafer et al., 2013; Ward, 2003). Media-effects theories have typically attributed a central role to media response states as underlying mechanisms of media-effects. These responses states have been divided into cognitive (e.g., counterarguing), affective (e.g., pleasure) and excitative (e.g., arousal) response states, which can occur simultaneously and interactively (Valkenburg & Peter, 2013). However, empirical investigation of these response states is still rare (Peter, 2011), especially in relation to the effects of sexual media content among adolescents (Peter, 2013).

The interaction of affective and excitative response states may be particularly important when explaining effects of sexual media content. For instance, it has been argued that sexual media content has the strongest influence when viewers are actively and affectively engaged in the sexual content, as they are likely to pay more attention to the content through this engagement (e.g., Lang, 2009; Wright, 2011; Wright, Malamuth, & Donnerstein, 2012). A few studies have suggested that affective and excitative response states can explain the influence of sexual media content on adolescents’ sexuality (e.g., Peter & Valkenburg, 2008a, 2009, 2010). However, research on the role of affective and excitative response states in the relationship between sexual media use and sexual outcomes is still scarce and has hardly been conducted in relation to more mainstream sexual content (Peter, 2013).

Young viewers have also been said to respond in cognitive and critical ways to sexual content (Bragg & Buckingham, 2009; Månsson & Löfgren-Martenson, 2007). For instance, in a study among Scandinavian adolescents, both boys and girls criticized the gender inequality and sexual objectification in sexual media content (Månsson & Löfgren-Mårtenson, 2007). Girls, in particular, were likely to
CHAPTER 1

show critical responses towards sexual media content, probably because they are taught that enjoying sexual content is inappropriate for girls or women (Månsson & Löfgren-Mårtenson, 2007). However, there is still a striking scarcity on how exactly such critical responses come about. For instance, it has been argued that critical responses to sexual media content are the result of a lack of congruency between the sexual content and the pre-existing sexual beliefs and values of viewers (e.g., Allen et al., 2007; Löfgren-Mårtenson & Månsson, 2010; Månsson & Löfgren-Mårtenson, 2007). Such an explanation has not been investigated systematically. Moreover, it is still unclear what characteristics of people, besides gender, make it more likely that they react critically to sexual media content. Given these gaps in the literature, the third aim of this dissertation was to investigate the role of response states, by looking at how the co-occurrence of affect and arousal (i.e., affective engagement) can explain the effects of sexual media content (Chapter 4) and by investigating when critical response states are most likely to occur (Chapter 6).

Understudied Outcome Variables

Given the stereotypical nature of most sexual content in the media (e.g., Attwood, 2009; Hilkens, 2008; Månsson et al. 2007), research has often dealt with the effects that such content may have on stereotypical beliefs. For instance, the use of sexually explicit material has been associated with more permissive or instrumental attitudes towards sex and beliefs of women as sex objects (for an overview, see Owens et al., 2012). Similar stereotypical attitudes have been related to sexual media content on mainstream television or in music videos (for an overview, see Nikken, 2009). However, attitudes that are related to the stereotypical way that female sexual behavior is portrayed have hardly been studied in relation to young people’s sexual media use. This is striking because most of the concerns about young people’s sexual media use have been centered on the stereotypical and misogynistic portrayal of sexual behavior, notably women’s own sexual behavior and the sexual behavior toward them. In sexually explicit material, for example, women are often portrayed as either willing to have sex or in need to be persuaded, or forced, into having sex (e.g., Dines, Jensen, & Russo, 1998).

Similar stereotypical content is also present in more mainstream sexual media content, such as music videos (e.g., Aubrey, Hopper, & Mbure, 2011; Kistler &
Lee, 2010; Zhang, Miller, & Harrison, 2008). Some scholars have suggested that these portrayals result in a sexual climate where girls are less capable to say ‘no’ to sex while boys are less likely to take ‘no’ for an answer and subsequently are more inclined to engage in sexual harassment (Brown, Steele, & Walsh-Childers, 2002; Hilkens, 2008). Although some studies have focused on the effects of sexual media content on heterosexual scripts (e.g., Kim et al., 2007), the specific sexual stereotypical beliefs about female sexual behavior have hardly been studied in relation to sexual media content, with the exception of one study on the influence of sexually explicit internet material (Peter & Valkenburg, 2011). Chapter 4 of this dissertation therefore deals with the question whether exposure to sexual music videos is related to a higher acceptance of the stereotypical idea that when girls say ‘no’ to sex, they mean ‘yes’.

Another frequently studied outcome variable is adolescents’ sexual behavior or experience (e.g., Brown & Bobkowski, 2011; Nikken, 2009). However, scholars have started to call for a broader focus on adolescent sexuality that should not only include adolescents’ sexual behavior, but also their sexual self-concepts, or their sense of who they are as a sexual person (e.g., O’Sullivan, Meyer-Bahlburg, & McKeague, 2006). Adolescents’ sexual self-concepts can have important implications for their sexual development and behavior (Hensel, Fortenberry, O’Sullivan, & Orr, 2011; Impett & Tolman, 2006; Rostosky, Dekhtyar, Cupp, & Anderman, 2008). For instance, having a positive sexual self-concept has been associated with more sexual experience and greater sexual satisfaction among adolescent girls (Impett & Tolman, 2006). Similarly, feeling positively about oneself as a sexual person is positively associated with adolescents’ sexual self-efficacy beliefs (Rostosky et al., 2008). An unstable sense of one’s sexual self, in contrast, may result in reduced feelings of control in sexual situations and, subsequently, a greater chance of becoming a victim of sexual assault (Hilkens, 2008).

Several scholars have argued that adolescents’ sexual media use may have an impact on sexual self-concepts (e.g., Peter & Valkenburg, 2008b, 2010; Subrahmanyam & Greenfield, 2008; Subrahmanyam, Smahel, & Greenfield, 2006). To date, however, research is still scarce and does not embrace different types of sexual media content in their relation to sexual self-concepts. The fourth aim of this dissertation was therefore to investigate sexual self-concepts
CHAPTER 1

in relation to sexually explicit internet material (in Chapter 5), and in relation to sexy self-presentation on social network sites (in Chapter 3).

Methodological Approach

This dissertation focuses on investigating the influence of sexual media content and thus essentially deals with questions of directional effects (see Figure 1 for an illustration of the expected relationships). Therefore, the findings in this dissertation are based on longitudinal survey data (Chapter 2 to 5) and on data from an experiment (Chapter 6). This multi-methodological approach has several advantages, notably the balance between external and internal validity. Longitudinal designs on the basis of panel surveys are of high external validity. They also offer the possibility to draw at least some conclusions on the direction of the relationships and the influence of the independent variable on the dependent variable. An experiment is the most rigorous design for studying a causal relationship with high internal validity. However, given the sensitive topic of sexuality, experiments among adolescents are difficult to implement or may ethically be impossible. Chapter 6 is therefore based on an experiment among a sample of young adult women.

The multi-methodological approach also offers the possibility to investigate short-term and long-term consequences of sexual media content. Chapter 2 to 5 all deal with the socializing influences of sexual media content. As these involve long-term indirect influences through socialization rather than short time direct influences, longitudinal retrospective research using surveys is considered most appropriate (Štulhofer et al., 2007). In addition, sensitive issues, such as sexual behavior, are best measured by using an online survey that adolescents can complete at home (Mustanski, 2001). Chapter 6, in turn, deals with more immediate responses to sexually explicit material (i.e., critical responses), which can be optimally measured in an experiment.

Chapter 2 to 5 all include online survey research among samples of Dutch adolescents ranging from 12- to 17-year olds, which were randomly selected from a panel that was originally sampled by Veldkamp, a Dutch survey institute. This sampling method resulted in large samples that are representative of the Dutch population. In addition, because the samples were randomly selected from the Veldkamp panel, the studies in this dissertation do not suffer from self-
selection biases and snowballing effects in the sampling process. The findings of these studies are thus based on large and reliable samples, and generalize to the population of Dutch adolescents.

![Diagram](image)

*Figure 1. Schematic model of relationships tested in this dissertation*

**Chapter Overview**

**Chapter 2.** This chapter deals with the question whether exposure to others’ sexy self-presentations on social network sites is related to adolescents’ sexual attitudes (i.e., sexual objectification of women and instrumental attitudes towards sex) and sexual behavior. In addition, I tried to investigate whether these relationships depend on adolescents’ gender and age. The findings of this study shed new light on an understudied type of sexual media content, namely sexual content generated by adolescents, by showing whether it can have a similar influence on adolescents’ sexuality as has previously been established for sexual content in traditional media outlets.

**Chapter 3.** This chapter investigates whether and how adolescents’ sexual media use can influence their sexual self-concept. More specifically, as social network sites have been considered an important new tool in adolescents’ sexual development, I investigated the influence of sexy online self-presentation
on the importance of a sexual self-concept for adolescents’ overall identity. In addition, I explored whether this influence differs for boys and girls. This chapter increases our knowledge on an understudied type of sexual media content (i.e., sexy self-presentation) as well as an understudied type of outcome variable (i.e., sexual self-concept), and thus broadens the current scope of research on the effects of sexual media use on adolescents’ sexuality.

Chapter 4. This chapter focuses on an understudied type of outcome variable of sexual media use: adolescents’ acceptance of female token resistance. In doing so, it contributes to the discussions about whether or not adolescents take over the misogynistic messages in sexual media content, in this case sexual music videos. I focused on sexual music videos because the content of such music videos has often been linked to misogynistic outcomes in public debates, but less so in the scientific literature. In addition, I investigated whether this influence can be explained by adolescents’ affective engagement with sexual music videos, and whether it differs for boys and girls.

Chapter 5. This chapter also deals with adolescents’ sexual self-concept. However, whereas Chapter 3 focused on the importance of sexual self-concepts for adolescents’ overall identity, this chapter focuses on the stability of adolescents’ sense of themselves as a sexual person. More specifically, I investigated whether adolescents’ use of sexually explicit internet material makes their sexual self-concepts more unstable. I looked at within-gender differences in adolescents’ sexual dispositions to investigate which types of adolescents are more susceptible to effects of sexually explicit internet material on their sexual self-concepts. In doing so, I focus specifically on sexual dispositions that are congruent with the stereotypical messages of (most) sexually explicit content.

Chapter 6. The final study of this dissertation aims to explain the critical responses to sexually explicit internet material that have often been found for female viewers. More specifically, I investigated whether such critical responses are the result of the lack of congruency between the sexually explicit content and viewers’ sexual dispositions. By looking at the congruency with sexual dispositions, I was able to distinguish between types of young women that are more or less likely to show such critical responses.
<table>
<thead>
<tr>
<th>Table 1. Chapter Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chapter 2</strong></td>
</tr>
<tr>
<td>Sexual Media Content</td>
</tr>
<tr>
<td>Response State</td>
</tr>
<tr>
<td>Sexual Outcome</td>
</tr>
<tr>
<td>Dispositional Susceptibility</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
References


CHAPTER 1


