

Cinematic Sex Doesn't Sell – Nor Even Artistically Impress!

Content Ratings, Box Office, Critical Reviews, and Movie Awards

Questions

- What role does graphic sexual content have in mainstream cinema?
 - Does it increase box office?
 - Or critical acclaim?
 - Or movie awards?
- How does the threefold impact of such content compare with other strong or mature content, such as violence?

Questions

- How is such "objectionable" or "exploitative" content related to female participation in the making of a film?
 - Producers
 - Directors
 - Writers
 - Actors
- Do women make different films?
- Is sexual content actually a manifestation of a gender-biased film industry?

Consider the Following Facts

- Female actors more likely to have been models; male actors more likely to have had actual training
- Movie stars more often male, and female movie stars have much shorter careers and earn far less money
- Male outstanding performances more likely to appear in award-winning films

Consider the Following Facts

- Male actors have a much higher probability of being the protagonists in blockbuster movies
- As female actors get older they tend to perform in fewer and less attractive roles
- Within the same film, female actors are more likely to reveal more of their bodies than are men

Past Research

- R-rated films may earn less box office but get higher critical evaluations and win more movie awards
- Strong violence, but not graphic sex, may enhance box office; violence with mild sex may be optimal regarding financial performance
- Some indication that graphic sex/nudity harms box office

Current Investigation

- Method
 - Sample
 - Success criteria
 - Cinematic predictors
 - Statistical controls
- Results
 - Linear effects
 - Curvilinear effects
- Discussion

Sample:

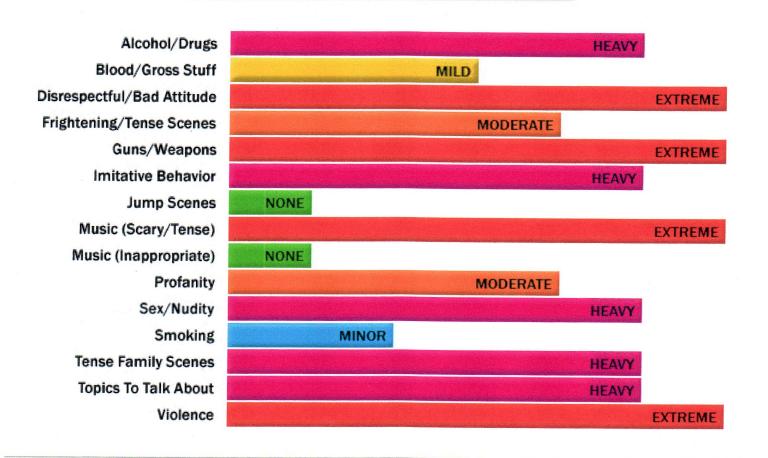
- 914 fiction films (870 live and 44 animated) released from 2001 to 2005, inclusively
- Documentaries, standup comedy films, and rereleases omitted
- All had detailed content ratings available on Screen It! (www.screenit.com)



"TAKEN"

(2009) (Liam Neeson, Maggie Grace) (PG-13)

At-A-Glance CONTENT SUMMARY



- One of Bryan's former agency coworkers jokingly asks if Lenore still has a "hardon" for Bryan, and then repeats that phrase.
- · While nothing explicit is seen and nothing ultimately happens Sheerah thanks Bryan for saving her life, all while dressed in just a robe in her hotel room.
- · After just meeting Peter outside the airport in Paris, Amanda tells Kim that he's "hot" and that she's going to sleep with him. She adds that she's heard French guys are amazing in bed, and tells Kim that she (Kim) has to lose it (her virginity) sometime, so it might as well be in Paris.
- About some bravado that Stuart is displaying, Bryan matter-of-factly tells him,
 "Now is not the time for d*ck measuring."
- · One of Bryan's associates states that Marko and the others kidnap young women, addict them to drugs, and then force them into prostitution.
- An out of focus magazine cover in the background of a shot appears to show (partially) a female model on the front and possibly the side of her bare butt (it's too out of focus to tell).

- · We see miscellaneous hookers on the street, soliciting business in standard attire, including views of cleavage. Bryan then approaches one, pretending to be a client (nothing explicit is said, but the talk is about paid sex).
- Bryan pays (as do other men) to enter a hooker pavilion of sorts, where various drugged young women are located behind hanging sheets or blankets. Looking for Kim, Bryan peers into the various areas, mostly seeing the strung out women, but he does spot one man behind one such woman, seated, but the view is brief and it doesn't appear that anything explicit is seen. When mayhem breaks out there, various women flee, and we briefly see one in her panties as she runs off.
- A classic style statue shows bare breasts.
- A comment is made that Kim will pull in a large sex slave bid due to being a virgin.
- · We see a bikini clad abductee (front and rear view in her thong bottom) who's being auctioned to the highest bidder. We then see Kim dressed in a similar but not quite as revealing outfit for the same purpose.
- Bryan finds Kim in a bra in the presence of the man who bought her for sex.

- Success criteria
 - Box office
 - US domestic gross (M = 46.95, SD = 61.55, range 0.02 to 436.47, N = 914): log transformed
 - UK gross (in millions of pounds sterling, M = 5.44, SD = 8.98, range 0.02 to 65.30, n = 671): log transformed
 - non-US world gross (M = 74.55, SD = 107.74, range 0.34 to 741.86, n = 300): log transformed
 - estimated US net (gross minus budget: M = 6.26, SD = 52.18, range -174.345 to 340.61, n = 873; but same results for half gross minus budget)

- Success criteria
 - Critical evaluations
 - Metacritic score (M = 50.55, SD = 17.76, range 6 to 94; N = 914)
 - Movie-guide ratings (2 items; M = 2.29, SD = 0.62, range 0.50 to 3.75; n = 911; $\alpha = .75$)
 - the two correlate .75

- Success criteria
 - Movie awards
 - Oscar awards (= 2) and nominations (= 1) in categories of picture, director, writing, and acting (M = 0.26, SD = 0.95, range 0-10, α = .77)
 - Golden Globe awards (= 2) and nominations (= 1) in categories of picture, director, writing, and acting (M = 0.36, SD = 1.27, range 0-12, α = .84)

- Cinematic predictors
 - Film content (from Screen It!):
 - 15: alcohol/drugs, blood/gore, disrespectful/bad attitude, frightening/tense scenes, guns/weapons, imitative behavior, jump scenes, scary/tense music, inappropriate music, profanity, sex/nudity, smoking, tense family scenes, topics to talk about, and violence
 - 6-point scale from none to extreme

- Cinematic predictors
 - Female involvement
 - Producers (ca. 7,000): 22.58% female
 - Directors (ca. 980): 5.83% female
 - Writers (ca. 2,450): 11.77% female
 - Actors (ca. 49,000): 32.38% female

- Statistical controls
 - MPAA ratings
 - 28 G, 126 PG, 386 PG-13, and 374 R
 - R with profanity (r = .64), sex/nudity (r = .49), blood/gore (r = .48), smoking (r = .40), drugs/alcohol (r = .35), disrespect (r = .34), violence (r = .27), and guns/weapons (r = .24); all ps < .001).
 - sex/nudity negatively with both G (r = -.35) and PG (r = -.47) (both p < .001), but almost zero with a PG-13 rating (r = -.03), hence the baseline

- Control variables
 - Release date
 - zero-one dummies for 2001-2005
 - even distribution: 172, 202, 181, 176, and 183 (χ 2 = 2.93, df = 4, p = .5707).

Results

- Linear
 - Individual items
 - Zero-order correlations

Table 1
Pearson Correlations Between Cinematic Success Criteria and Screen It! Content Assessments

		Box office			Film	Film critics		Movie awards	
Content assessment	US	UK	WD	NT	MC	MG	OS	GG	
Alcohol/drugs	20***	19***	29***	14***	.03	02	.09**	.12***	
Blood/gore	.04	.02	.03	03	.00	05	.05	01	
Disrespectful/bad attitude	00	05	.04	06	01	05	.02	02	
Frightening/tense scenes	.14***	.17***	.18**	.08*	.09**	.10**	.06	01	
Guns/weapons	.11***	.06	.23***	05	03	06	.01	05	
Imitative behavior	.07*	05	.00	.04	19***	18***	11***	11**	
Inappropriate music	.00	80	01	01	11	12	.00	.01	
Jump scenes	.13***	.08*	.04	.07*	09**	11***	07*	08*	
Profanity	−.27***	24***	37***	20***	.01	04	.04	.06	
Scary/tense music	.26***	.17***	.26***	.07*	07*	05	09**	15***	
Sex/nudity	26***	23***	31***	21***	01	−.09 ^{**}	01	.08*	
Smoking	26***	15**	18**	18***	.22***	.17***	.18***	.20***	
Tense family scenes	03	06	08	.03	.21***	.26***	.14***	.17***	
Topics to talk about	12***	07	08	03	.27***	.26***	.12***	.10**	
Violence	.11***	.05	.19**	01	05	06	.02	05	

Note. US = US gross (n = 914); UK = UK gross (n = 671); WD = world gross (n = 300); NT = US net (n = 873); MC = Metacritic score (n = 914); MG = movie-guide ratings (n = 911); OS = Oscar (n = 914); and GG = Golden Globes (n = 914). *p < .05. **p < .01. ***p < .001.

	Box office						
Content assessment	US	UK	WD	NT			
Alcohol/drugs	20***	19***	29***	14***			
Blood/gore	.04	.02	.03	03			
Disrespectful/bad attitude	00	05	.04	06			
Frightening/tense scenes	.14***	.17***	.18**	.08*			
Guns/weapons	.11***	.06	.23***	05			
Imitative behavior	.07*	05	.00	.04			
Inappropriate music	.00	80	01	01			
Jump scenes	.13***	.08*	.04	.07*			
Profanity	−.27***	24***	37***	−.20*°°			
Scary/tense music	.26***	.17***	.26***	.07*			
Sex/nudity	−.26 ***	23***	31***	−.21****			
Smoking	26 ***	15**	18**	18***			
Tense family scenes	03	06	08	.03			
Topics to talk about	12***	07	08	03			
Violence	.11***	.05	.19**	01			

	Film critics		
Content assessment	MC	MG	
Alcohol/drugs	.03	02	
Blood/gore	.00	05	
Disrespectful/bad attitude	01	05	
Frightening/tense scenes	.09**	.10**	
Guns/weapons	03	06	
Imitative behavior	19***	18***	
Inappropriate music	11	12	
Jump scenes	09**	11***	
Profanity	.01	04	
Scary/tense music	07*	05	
Sex/nudity	01	−.09**	
Smoking	.22	.17	
Tense family scenes	.21***	.26***	
Topics to talk about	.27***	.26***	
Violence	05	06	

	Movie	awards
Content assessment	OS	GG
Alcohol/drugs	.09**	.12***
Blood/gore	.05	01
Disrespectful/bad attitude	.02	02
Frightening/tense scenes	.06	01
Guns/weapons	.01	05
Imitative behavior	11***	11**
Inappropriate music	.00	.01
Jump scenes	07*	08*
Profanity	.04	.06
Scary/tense music	09**	15***
Sex/nudity	01	.08*
Smoking	.18***	.20***
Tense family scenes	.14***	.17***
Topics to talk about	.12***	.10**
Violence	.02	05

Results

- Linear
 - Individual items
 - Zero-order correlations
 - Standardized partial regression coefficients

Table 2 Standardized Partial Coefficients (Bs) for Cinematic Success Criteria Regressed on Screen It! Content Assessments Controlling for MPAA Ratings and Release Year

		Box	office		Film	critics	Movie	awards
Content assessment	US	UK	WD	NT	MC	MG	os	GG
Alcohol/drugs	.01	01	10	.02	02	00	.07	.04
Blood/gore	.15**	.10	.12	.07	00	05	.08	01
Disrespectful/bad attitude	.01	03	05	.00	05	06	03	04
Frightening/tense scenes	.00	.20**	.08	.11	.24***	.27***	.22***	.15*
Guns/weapons	.06	.08	.29**	06	.03	.00	01	02
Imitative behavior	.11***	.01	.06	.11**	12***	−.09 ^{**}	10**	09°
Inappropriate music	.11**	.01	.11*	.08*	07°	04	.03	.02
Jump scenes	.01	04	03	.07	17***	20***	09°	04
Profanity	10	18**	39***	15*	13*	10	06	10
Scary/tense music	.21***	.00	.03	07	07	04	27***	21**
Sex/nudity	06	08	10	14**	05	12**	14**	03
Smoking	−.11***	04	01	09*	.18***	.15***	.12**	.14***
Tense family scenes	.07	05	.00	.07	.05	.12***	.07	.12**
Topics to talk about	03	04	02	.01	.17***	.18***	.03	02
Violence	08	15	11	01	14*	12	.04	.00

Note. See Table 1 for key to abbreviations and corresponding sample sizes. *p < .05. **p < .01. ***p < .001.

	Box office					
Content assessment	US	UK	WD	NT		
Alcohol/drugs	.01	01	10	.02		
Blood/gore	.15**	.10	.12	.07		
Disrespectful/bad attitude	.01	03	05	.00		
Frightening/tense scenes	.00	.20**	.08	.11		
Guns/weapons	.06	.08	.29**	06		
Imitative behavior	.11***	.01	.06	.11**		
Inappropriate music	.11**	.01	.11*	.08*		
Jump scenes	.01	04	03	.07		
Profanity	10	18**	39***	15*		
Scary/tense music	.21***	.00	.03	07		
Sex/nudity	06	08	10	14**		
Smoking	11**	04	01	09*		
Tense family scenes	.07	05	.00	.07		
Topics to talk about	03	04	02	.01		
Violence	08	15	11	01		

NO CONSISTENT IMPACT ACROSS ALL CRITERIA

	Film	critics
Content assessment	MC	MG
Alcohol/drugs	02	00
Blood/gore	00	05
Disrespectful/bad attitude	05	06
Frightening/tense scenes	.24***	.27***
Guns/weapons	.03	.00
Imitative behavior	12***	−.09°°
Inappropriate music	07*	04
Jump scenes	17***	20***
Profanity	13*	10
Scary/tense music	07	04
Sex/nudity	05	12**
Smoking	.18***	.15***
Tense family scenes	.05	.12***
Topics to talk about	.17***	.18***
Violence	14*	12

	Movie awards		
Content assessment	os	GG	
Alcohol/drugs	.07	.04	
Blood/gore	.08	01	
Disrespectful/bad attitude	03	04	
Frightening/tense scenes	.22***	.15*	
Guns/weapons	01	02	
Imitative behavior	10**	−.09 *	
Inappropriate music	.03	.02	
Jump scenes	09*	04	
Profanity	06	10	
Scary/tense music	27***	21**	
Sex/nudity	14**	03	
Smoking	.12**	.14***	
Tense family scenes	.07	.12**	
Topics to talk about	.03	02	
Violence	.04	.00	

Table 3
Pearson Correlations Between Female Crew/Cast Proportions
and Screen It! Content Assessments

Content assessment	Producers	Directors	Writers	Actors
Alcohol/drugs	.02	.04	.04	.08*
Blood/gore	25***	13***	22***	32***
Disrespectful/bad attitude	20***	08*	13***	22 ***
Frightening/tense scenes	16***	15***	20***	34***
Guns/weapons	26***	−.17***	25 ***	45 ***
Imitative behavior	06	.01	05	02
Inappropriate music	03	.07*	01	.03
Jump scenes	13***	12***	13***	11**
Profanity	09**	00	08*	00
Scary/tense music	—.20***	18***	25***	36***
Sex/nudity	02	.05	.03	.19***
Smoking	04	.02	03	11***
Tense family scenes	.07*	.09**	.12***	.18***
Topics to talk about	.08*	.12***	.08*	.10**
Violence	28***	19***	31***	43***

Note. N = 914 for all correlations.

^{*}p < .05. **p < .01. ***p < .001.

Correlations with Budget

- More women in cast/crew, lower costs:
 - Producers: -.09 with female proportion
 - Directors: -.10 with female proportion
 - Writers: -.10 with female proportion
 - Actors: -.22 with female proportion
- Yet, the latter has the highest positive correlation with sex/nudity
- Is sex in cinema because sex is cheap?

Another Issue

- Content scores are not independent, some exhibiting considerable shared variance
 - e.g., sex/nudity positively correlates with alcohol/drugs (r = .57), blood/gore (r = .23), disrespectful/bad attitude (r = .24), imitative behavior (r = .20), inappropriate music (r= .30), profanity (r = .63), smoking (r = .32), and talk topics (r = .17), but negatively correlated with frightening/tense scenes (r = -.19), scary music (r = -.27), and jump scenes (r = -.07; all rs significant at .05 level or better).

Results

- Linear
 - Individual items:
 - Zero-order correlations
 - Standardized partial regression coefficients
 - Factor scores

Principle Components Analysis with Varimax Rotation

- Violence/Fear: violence (.91), frightening/tense scenes (.85), scary music (.85), guns/weapons (.82), blood/gore (.81), disrespectful attitude (.64), and jump scenes (.62): α = .89
- **Sex/Indulgence**: drugs/alcohol (.78), profanity (.76), sex/nudity (.75), and smoking (.74): α = .79
- Topics/Issues: topics to talk about (.83) and tense family scenes (.83): α = .50
- Corrupting Youth: imitative behavior (.82) and inappropriate music (.71): α = .45

Table 4
Standardized Partial Coefficients (βs) for Cinematic Success Criteria Regressed on the Four Content Factors Controlling for MPAA
Ratings and Release Year

	Box office			Film	critics	Movie	Movie awards	
Content factor	US	UK	WD	NT	MC	MG	os	GG
Violence/fear Sex/indulgence Topics/issues Corrupting youth	.29*** 21*** .03 .16***	.13** 21** 05 01	.29*** 33*** 02 .13*	.07* 24*** .10** .13***	09* .07 .21*** 19***	08* .01 .29*** 15***	.01 .12* .14*** 07	10** .13* .14*** 09*

Note. US = US gross (n = 914); UK = UK gross (n = 671); WD = world gross (n = 300); NT = US net (n = 873); MC = Metacritic score (n = 914); MG = movie-guide ratings (n = 911); OS = Oscar (n = 914); and GG = Golden Globes (n = 914).

* p < .05. ** p < .01. *** p < .001.

	Box office						
Content factor	US	UK	WD	NT			
Violence/fear	.29***	.13**	.29***	.07*			
Sex/indulgence	21***	21**	33***	24***			
Topics/issues Corrupting youth	.03 .16***	05 01	02 .13*	.10** .13***			

	Film c	Film critics		
Content factor	MC	MG		
Violence/fear	09*	08*		
Sex/indulgence	.07	.01		
Topics/issues	.21***	.29***		
Corrupting youth	19***	15***		

	Movie	awards
Content factor	OS	GG
Violence/fear Sex/indulgence	.01 .12*	10** .13*
Topics/issues	.14***	.14***
Corrupting youth	07	09*

Results

- Linear
 - Individual items:
 - Zero-order correlations
 - Standardized partial regression coefficients
 - Factor scores
- Nonlinear
 - mean-deviation form
 - linear and quadratic terms

Table 5
Standardized Partial Coefficients (βs) for Cinematic Success Criteria Regressed on Linear and Quadratic Content Factors
Controlling for MPAA Ratings and Release Year

		Box	office		Film	critics	Movie	awards
Content factor	US	UK	WD	NT	MC	MG	os	GG
Violence/fear								
Linear	.29***	.13**	.29***	.06	10**	09*	02	11**
Quadratic	.11***	.07	02	.11**	06	07*	08*	08*
Sex/indulgence								
Linear	19***	18**	33***	22***	.07	.00	.10	.11*
Quadratic	.03	.10	00	.20***	.12**	.09*	.03	.03
Topics/issues								
Linear	.03	04	02	.11**	.20***	.27***	.13***	.12***
Quadratic	.01	04	04	.01	03	.01	.04	.06
Corrupting youth								
Linear	.21***	.03	.13	.15**	23***	20***	10°	11*
Quadratic	05	05	01	03	.03	.05	.02	.01

Note. US = US gross (n = 914); UK = UK gross (n = 671); WD = world gross (n = 300); NT = US net (n = 873); MC = Metacritic score (n = 914); MG = movie-guide ratings (n = 912); OS = Oscar (n = 914); and GG = Golden Globes (n = 914).

		Box	office	
Content factor	US	UK	WD	NT
Violence/fear				
Linear	.29***	.13**	.29***	.06
Quadratic	.11***	.07	02	.11**
Sex/indulgence				
Linear	19***	18**	33***	22***
Quadratic	.03	.10	00	.20***
Topics/issues				
Linear	.03	04	02	.11**
Quadratic	.01	04	04	.01
Corrupting youth				
Linear	.21***	.03	.13	.15**
Quadratic	05	05	01	03

Content factor	Film critics		
	MC	MG	
Violence/fear			
Linear	−.10°°	09°	
Quadratic	06	−.07°	
Sex/indulgence			
Linear	.07	.00	
Quadratic	.12**	.09*	
Copics/issues			
Linear	.20***	.27***	
Quadratic	03	.01	
Corrupting youth			
Linear	23***	20***	
Quadratic	.03	.05	
	_		

	Movie awards		
Content factor	OS	GG	
Violence/fear			
Linear	02	11**	
Quadratic	08*	08*	
Sex/indulgence			
Linear	.10	.11*	
Quadratic	.03	.03	
Topics/issues			
Linear	.13***	.12***	
Quadratic	.04	.06	
Corrupting youth			
Linear	10°	11°	
Quadratic	.02	.01	

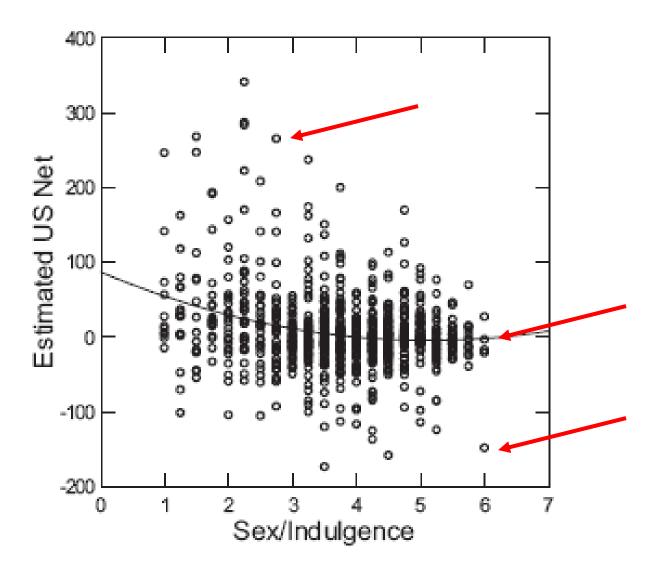


Figure 1. The scatterplot for estimated U.S. net as a function of the film's score on the sex/indulgence factor. The least-squares bit-fit curve depicts the second-order polynomial (linear and quadratic terms).

Inferences

 If the goal is to maximize gross box office, violence/fear is the optimal content, especially US and worldwide

Discussion

- Why doesn't sex sell?
 - At one time the belief might have been true, but it is no longer so
 - Sex does indeed sell, and maybe even impress, but the effect is utterly contingent on a host of more elusive factors
 - Perhaps sex and nudity never had any substantial economic or artistic benefits, but rather it was one of those self-perpetuating urban myths – surviving because of conspicuous exceptions

Illustration: Titanic

- This 1997 film has "heavy" sex/nudity yet was highest grossing film in US history!
- Yet once adjustment made for inflation:

- Gone With the Wind (rated G by the MPAA on re-release, minor sex/nudity)
- Star Wars (PG, no sex/nudity)
- The Sound of Music (G)
- E.T. The Extraterrestrial (PG, no sex/nudity)
- The Ten Commandments (G)
- Titanic (PG-13, heavy sex/nudity)
- Jaws (PG, mild sex/nudity)
- Snow White and the Seven Dwarfs (G)
- Doctor Zhivago (rated PG-13 for mature themes)
- Ben Hur (G)

Top 10 among current 914

- Shrek 2 (PG, mild sex/nudity)
- Spider-Man (PG-13, moderate sex/nudity)
- Star Wars Episode III: Revenge of the Sith (PG-13, mild sex/nudity)
- The Lord of the Rings: The Return of the King (PG-13, minor sex/nudity)
- Spider-Man 2 (PG-13, mild sex/nudity)
- The Passion of the Christ (R, minor sex/nudity)
- The Lord of the Rings: The Two Towers (PG-13, minor sex/nudity)
- Finding Nemo (G, no sex/nudity) Harry Potter and the Sorcerer's Stone (PG, no sex/nudity)
- The Lord of the Rings: The Fellowship of the Ring (PG-13, no sex/nudity)

An Artistic Justification?

- Sex/Indulgence does correlate positively with Oscars and Golden Globes
 - Yet this may be the result of not sex per se but rather its association with other edgy content, such as alcohol, drugs, and smoking, which have stronger connections with honors
- Topics/Issues provides a far more reliable route to critical acclaim and movie awards

So When Is Cinematic Sex Not Gratuitous?