The Relationship between
Television Fiction and Fear of Crime
An Empirical Comparison of Three Causal Explanations

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A B S T R A C T

Three hypotheses regarding the relationship between television viewing and fear of crime exist. The *cultivation hypothesis* states that watching television increases fear of crime. The *mood management hypothesis* states that frightened people will watch more crime on television to learn how to cope with their fear. The *withdrawal hypothesis* states that people who are afraid of crime will be afraid to leave the house. This leads to heavier television viewing, thus creating a spurious relationship between fear of crime and watching crime on television. This article compares these three models and a null model using structural equation models. Data from a representative sample of 909 respondents from Flanders, Belgium, offer support for the cultivation hypothesis, which offers a better explanation than the null model, but do not support either of the other hypotheses. In the model, direct experience of crime was not related to fear, while television viewing was.

Key Words causal modelling, cultivation, fear of crime, mood management, television effects

1. Inroduction

Generally speaking, three models have been put forward regarding the relationship between television viewing and fear of crime. The *cultivation hypothesis* states that watching television increases fear of crime (for a recent overview, see Shanahan and Morgan, 1999).

> *H1:* Heavy viewers of crime fiction will be more afraid of becoming a victim of crime than light viewers.

The *mood management hypothesis* states that frightened people will watch more crime on television to learn how to cope with their fear. (For recent overviews, see Minnebo, 2000; Zillmann, 2000.)

> *H2:* People who are afraid of crime will watch more crime fiction on television than people who are less afraid.

The *withdrawal hypothesis* (Cook et al., 1983) states that people who are afraid of crime because of personal experience of crime or personality traits such as alienation or anomie (see McLeod et al., 1965; Potter, 1988) will be afraid to leave the house. People who are at home more have more opportunities to watch television, thus creating a spurious relationship between fear of crime and watching crime on television.

> *H3a:* Fearful people are afraid to leave the house.
> *H3b:* People who are at home more, watch more television.
> *H3c:* There is no direct relationship between viewing television fiction and fear of crime.

Finally, it has been well established that television programmes can have a very different meaning for different viewers (see Morley, 1980; Ang, 1985; Liebes and Katz, 1990). In extreme cases, what is frightening for one viewer may be touching or romantic for another. One should therefore also consider a *null hypothesis* in which viewers will be influenced in ways too different to show up in a quantitative analysis.

> *H0:* There is no statistically demonstrable relationship between television viewing and fear of crime.

Research design

Sample

Seventy-seven undergraduate students of media studies, all living in Flanders (Belgium), were carefully trained as interviewers using documented and established techniques (see Carton and Loosveldt, 1991). The

effects of this training programme on the quality of responses were reported by Billiet and Loosveldt (1988). At randomly selected addresses, the member of the household who was the next to celebrate his or her birthday was selected for a face-to-face interview. This method resulted in a random sample which reflected the demography of Flanders. After careful examination of the data for coding errors or other abnormalities, 909 questionnaires were retained for analysis.

Measures

Demographics   Demographic measures included gender, age and level of education.

Television viewing   The first measure estimated *frequency of viewing*: viewers were asked to indicate how many weekdays they watched television a week, and how many Fridays, Saturdays and Sundays they watched a month. Weekday viewing was on a scale from 1 to 4, Friday, Saturday and Sunday viewing was rated as 1 for 'every Friday', .75 for 'three Fridays out of four', etc. The second measure estimated *viewing volume* by asking respondents to estimate the number of hours they watched television on a viewing weekday, Friday, Saturday and Sunday. The third measure estimated *selectivity*: on a scale from 1 (never) to 5 (very often), respondents were asked to rate how often they watched the following programme types: (a) action and police series and films, (b) series and films centred around fighting and martial arts, (c) horror, (d) thrillers. Each category also listed the programmes aired at the time or in the preceding year to help define the genres.

Fear   Four questions on fear of crime were taken from Sparks and Ogles (1990). Respondents were asked to indicate on an 11-point scale from 0 (not frightened at all) to 10 (very frightened) how frightened they were that (a) someone might threaten them with a weapon; (b) an unknown assailant might attack them and hit them; (c) unknown people might loiter around the area at night; (d) they would be murdered.

Activity level   Activity level was measured as 'absence from the home' by asking 'how often do you go to meetings of organizations or associations or how often are you away from home for all kinds of activities?' Respondents could answer on a six-point scale, where 1 = several times a week; 2 = about once a week; 3 = several times a month; 4 = about once a month; 5 = once or a few times a year; 6 = never.

Experience of crime   Personal experience of crime was measured as: (a) Have you ever been mugged or attacked on the street? (b) Has your house ever been burgled? (c) Has your house been burgled in the past year? Indirect personal experience was measured as: (a) Have any of your neighbours been mugged or attacked on the street in the past year? (b) Have any of your other relatives or acquaintances been mugged or attacked on the street in the past year? (c) Has the house of any of your neighbours been burgled in the past year? (d) Has the house of any of your other relatives or acquaintances been burgled in the past year?

General remarks regarding the three models

Traditional cultivation analysis states that viewers are not selective. Whoever watches a lot of television is assumed to watch a lot of everything (see Signorielli, 1986). Research shows that, even in Europe, those who watch a lot of television generally seem to watch a lot of everything (Brosius et al., 1992; Weimann et al., 1992; Van den Bulck, 1995). Nevertheless, the cultivation hypothesis does not, of course, claim that it is television viewing per se that causes change. It is the violent content of mainstream television fiction which tells viewers stories about the real world. In terms of a causal model this means that the cultivation hypothesis assumes, first, that fear of crime is caused by violent fiction and second, that consumption of violent fiction can be predicted by some measure of general television viewing. In the present study, a measure of the amount of viewing and a measure of viewing crime fiction are therefore modelled separately.

To test the second hypothesis it suffices to reverse the causal link between crime fiction and fear.

The third hypothesis is usually defined as a causal relationship between viewing volume and fear of crime. The actual theoretical model, however, should be more complicated. There seems to be no a priori reason to assume that people who are frightened would watch television for more hours each day. The actual assumption underlying the third hypothesis is that people who are frightened will go out less and that people who go out less watch television *more often* (and not 'longer', as it is often phrased). In model terms this necessitates a variable which measures time spent outside the house and a variable which measures how often the respondent watches television. People who are frightened stay at home more. People who are at home more often will have the opportunity to watch television more often. The present study therefore uses a measure of viewing frequency (estimating how many days a week one

watches television) rather than a measure of viewing volume (which focuses on how many hours are spent in front of the television set).

Finally, the models have to take into account that direct and indirect experience of crime may explain fear of crime.

Data analysis

The three models were analysed using the LISREL program for structural equation modelling. Structural equation models test the extent to which a causal model consisting of latent variables fits the data. While latent variables generally require more than one observed variable, it is customary to turn single observed variables such as gender and age into latent variables with only one observed variable and a fixed error variance of zero.

Causal analyses may show that certain hypotheses are untenable because the data do not support them, other hypotheses are less probable because only weak support exists, while other hypotheses are not contradicted at all by the findings. This implies that one set of observations may support different, even opposing models (see Jöreskog and Sörbom, 1993).

Results

Data preparation

Models were estimated using polychoric and polyserial correlations and the asymptotic covariance matrix. Estimation method was weighted least squares.

To develop models with a good fit, the strategies outlined by Jöreskog and Sörbom (1993) and Hayduk (1987) were applied. Aish and Jöreskog (1990: 411) remark that 'in the final model, all *t*-values should be significant and all the parameters should have a real substantive justification and interpretation'. If the path between two variables is not significant the model should be tested again without this path.

Given the rather large number of respondents it is unlikely for models to have a probability of the chi-square larger than .05. The root-mean-square error of approximation is therefore a better and more robust measure which deals with the large N.

All models were identical, with the exception of the paths which represented the central hypothesis. This means that all the paths in one model also occurred in all other models. This was done to ensure maximal

comparability between the models. The only elements influencing any differences in fit or explained variance were the paths central to each hypothesis. This means that each model contained a path from 'going out' to 'frequency of viewing' and a path from 'frequency of viewing' to 'crime drama viewing'. While not central to a hypothesis based on cultivation theory or on mood management, there is nothing in either hypothesis that would prohibit inclusion of these paths.

Data description

After list-wise deletion of missing variables, data of 574 respondents were entered into the three models: 52 percent of this reduced sample were women, 48 percent were men. Twenty-five percent of the respondents reported having had at least one personal experience of crime: 15 percent reported having been mugged or attacked on the street; 15.7

Table 1 Mean and standard deviation of the variables used in the analyses

Variable	Mean	SD
Activity level	3.157	1.625
Education	3.016	1.236
Age	44.810	16.181
Selective viewing		
Action	1.641	1.164
Martial arts	0.596	0.917
Thrillers	1.530	1.163
Horror	0.681	0.950
General viewing		
Weekdays: freq.	3.484	1.007
Weekdays: minutes	140.409	84.780
Fridays: freq.	0.750	0.333
Fridays: minutes	156.925	90.917
Saturday: freq.	0.730	0.319
Saturdays: minutes	170.226	91.712
Sundays: freq.	0.811	0.306
Sundays: minutes	162.674	93.167
Fear		
Fear: threat	2.890	2.824
Fear: assault	3.000	2.713
Fear: loitering	2.976	2.587
Fear: murder	2.413	3.110

percent reported that his or her house had been burgled in the past, which for 3.7 percent had happened in the preceding year; 42 percent reported interpersonal experiences of crime through neighbours or relatives: 8.3 percent reported that one of their neighbours had been attacked or mugged on the street and 22.4 percent reported that this had happened to more distant acquaintances; 33.6 percent claimed a burglary had occurred in the house of at least one of their neighbours in the preceding year, while 40.4 percent claimed this had happened to more distant acquaintances. Means and standard deviations of the other variables are reported in Table 1.

Preliminary analyses

A measurement model of frequency of viewing and volume of viewing shows that while frequency and volume are related (the correlation between the two latent variables is .49) they actually are two separate concepts: volume only predicts 24 percent of frequency and vice versa. This shows that viewing frequency and amount of daily viewing should not be used as synonyms.

Remarkably, there were no statistically significant paths from experience of crime to any of the effects variables in any of the tested models. This suggests that neither personal experience of crime nor interpersonal experience of crime as measured in this study had any significant effect on fear of crime, even though both the measures of experience and the measures of fear referred to personal safety and the respondents' neighbourhood. Finally, only three indicators of fear of crime were used as fear of having strangers loiter around the area was found to load onto a different concept.

Model comparison

Table 2 shows the indices of fit of the three models and of a null model. The null model contained all variables and paths with the exception of

Table 2 Explained variance of the dependent variables for the three models and the null model

R^2	Going out	Viewing freq.	Crime drama	Fear of crime
Null	.23	.30	.57	.19
Cultivation	.06	.26	.65	.64
Mood repair	.13	.30	.96	.01
Withdrawal	.25	.28	.56	.20

Table 3 Goodness-of-fit indices of the three models and the null model and size of lambda and significance of central explanatory variables (N = 574)

	df	χ^2	AGFI	ECVI	RMSEA	CAIC	Central path	Lambda
Null	87	216.8***	.97	.49	.051	459.45	–	–
Cultivation model	85	169.4***	.98	.42	.042	426.77	Fiction to fear	.74 *
Mood repair model	85	199.4***	.97	.47	.048	456.77	Fear to fiction	.65 NS
Withdrawal model	85	211.1***	.97	.49	.051	468.42	Fear to going out	−.08 NS
							Going out to TV frequency	.13 NS

Notes: AGFI = adjusted goodness-of-fit index; ECVI = expected cross-validation index; RMSEA = root-mean-square error of approximation; CAIC = Consistent version of Akaike's Information Criterion.
NS = not significant; *p < .05; ***p < .0001.

the explanatory paths at the core of each model. Thus there was no path from crime drama viewing to fear of crime or vice versa and no path from fear of crime to going out.

All four models offer a comparable fit (see Table 2). While the chi-square statistic is significant on the $p < .0001$ level (not unusual in LISREL models with a large number of respondents) the adjusted goodness-of-fit index and the root-mean-square error of approximation (RMSEA) all indicate that the four models fit the data, even though the RMSEA is higher than the .05 cut-off point for the null model and the withdrawal model. Table 3 shows that the cultivation model also offers the best explanation of the fear of crime variable.

There are two reasons to accept the cultivation model as the model best describing the relationships found in the data. First, the Consistent version of Akaike's Information Criterion (a measure of fit which takes both the number of degrees of freedom and the sample size into account) is lowest for the cultivation model, suggesting it is a better fitting model than the other three. All other indicators of goodness-of-fit favour the cultivation hypothesis as well. Second, only the cultivation model shows a significant path along the lines of the hypothesis. In both the withdrawal and the mood repair model, the hypothesized paths are not significant. In other words, while the measurement part of the withdrawal model and the mood repair model are good enough to provide an overall fit, the paths central to the hypothesis are not significant. This means that neither of those two models has any explanatory value regarding the hypotheses on which they were based.

This study included measures of direct and indirect experience of crime. There was no significant relationship between experience of crime and either watching crime on television or (more surprisingly) being afraid of crime. It appears, then, that in a sample of the general population *mediated experience* (i.e. watching television) is a better predictor of fear of crime than actual experience of crime.

References

Aish, A.M. and K.G. Jöreskog (1990) 'A Panel Model for Political Efficacy and Responsiveness: An Application of LISREL 7 with Weighted Least Squares', *Quality and Quantity* 24: 405–26.

Ang, I. (ed.) (1985) *Watching Dallas: Soap Opera and the Melodramatic Imagination*. London: Methuen.

Billiet, J. and G. Loosveldt (1988) 'Improvement of the Quality of Responses to Factual Survey Questions by Interviewer Training', *Public Opinion Quarterly* 52: 190–211.

Brosius, H.-B., J.M. Wober and G. Weimann (1992) 'The Loyalty of Television Viewing: How Consistent is TV-Viewing Behavior?', *Journal of Broadcasting and Electronic Media* 36(3): 321–36.

Carton, A. and G. Loosveldt (eds) (1991) *Over interviewen gesproken: handleiding bij de training van interviewers.* Leuven: Departement Sociologie KULeuven.

Cook, T.D., D.A. Kendzierski and S.V. Thomas (1983) 'The Implicit Assumptions of Television Research: An Analysis of the 1982 NIMH Report on Television and Behaviors', *Public Opinion Quarterly* 47: 161–261.

Hayduk, L.A. (ed.) (1987) *Structural Equation Modeling with LISREL: Essentials and Advances*. Baltimore, MD: Johns Hopkins University Press.

Jöreskog, K.G. and D. Sörbom (eds) (1993) *LISREL8®: Structural Equation Modeling with the SIMPLIS® Command Language*. Hillsdale, NJ: Lawrence Erlbaum.

Liebes, T. and E. Katz (eds) (1990) *The Export of Meaning: Cross Cultural Readings of Dallas.* Oxford: Oxford University Press.

McLeod, J., S. Ward and K. Tancill (1965) 'Alienation and Uses of the Mass Media', *Public Opinion Quarterly* 29(4): 583–94.

Minnebo, J. (2000) 'Fear of Crime and Television Use: A Uses and Gratifications Approach', *Communications* 25(2): 125–42.

Morley, D. (ed.) (1980) *The 'Nationwide' Audience: Structure and Decoding.* London: BFI.

Potter, W.J. (1988) 'Perceived Reality in Television Effects Research', *Journal of Broadcasting and Electronic Media* 32(1): 23–41.

Shanahan, J. and M. Morgan (1999) *Television and its Viewers: Cultivation Theory and Research*. Cambridge: Cambridge University Press.

Signorielli, N. (1986) 'Selective Television Viewing: A Limited Possibility', *Journal of Communication* 36(3): 64–76.

Sparks, G.G. and R.M. Ogles (1990) 'The Difference between Fear of Victimization and the Probability of Being Victimized: Implications for Cultivation', *Journal of Broadcasting and Electronic Media* 34(3): 351–8.

Van den Bulck, J. (1995) 'The Selective Viewer: Defining (Flemish) Viewer Types', *European Journal of Communication* 10(2): 147–77.

Weimann, G., H.-B. Brosius and J.M. Wober (1992) 'TV-Diets: Toward a Typology of TV Viewership', *European Journal of Communication* 7: 491–515.

Zillmann, D. (2000) 'Mood Management in the Context of Selective Exposure Theory', *Communication Yearbook* 23: 103–23.