UNTANGLING THE RELATIONSHIP BETWEEN FEAR OF CRIME AND PERCEPTIONS OF DISORDER

Evidence from a Longitudinal Study of Young People in England and Wales

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Over the last 40 years and more, a growing number of researchers have explored the links between perceptions of disorder and fear of criminal victimization. Many of these studies have posited a causal link from perceptions of disorder to subsequent fear, with disorderly cues in the environment signalling to individuals that an area is in decline and unable to control deviant behaviour. But a growing body of evidence approaches this question from the opposite direction, emphasizing the socially constructed nature of perceived disorder and the potential role that fear may have in giving meaning to ambiguous disorderly cues present in the environment. This conceptual uncertainty stems, in part, from the reliance of existing research on cross-sectional data, making it impossible to say whether it is perceptions of disorder that shape fear or whether fear drives perceived disorder. A cross-lagged panel design is applied to longitudinal data from the Offending Crime and Justice Survey to more carefully explore the causal links between fear and disorder.

Keywords: fear, disorder, longitudinal analysis

Introduction

The link between perceptions of disorder and fear of crime is well established in criminology, with a wealth of studies examining how disorder and fear co-relate (for recent reviews, see Farrall et al. 2009; Vanderveen 2006). Many of these studies have argued that perceived disorder leads to subsequent increases in fear of crime, with low-level signs of disorder in the local environment signifying to residents that an area is in decline and unable to control deviant behaviour, leading to heightened perceptions of victimization risk. This ‘disorder perspective’ has since been instrumental in guiding public control policy, with a range of initiatives introduced that aim to tackle low-level deviance with the goal of alleviating public concerns about crime.

Yet, there is now a growing body of research that has approached this relationship from the opposite direction, examining the ways that local residents come to view disorderly signs in the environment as problematic (Carvalho and Lewis 2003; Sampson and Raudenbush 2004; Franzini et al. 2008). Highlighting the socially constructed nature of perceived disorder, this research explores how different individuals form different conclusions about the same disorderly cues, based on prior ideological positions and relational concerns (Girling et al. 2000; Jackson 2004). Whilst not directly embedded within the fear of crime literature, the implication of the contingent nature of perceptions of disorder is that individual concerns about potential victimization will serve to

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raise the significance of these ambiguous cues within the environment, which will, in
turn, increase the likelihood of them being interpreted as problematic.

To date, the bulk of the evidence base exploring the link between disorder and fear
has drawn on cross-sectional survey data to make these causal claims. Researchers
have typically linked survey respondent perceptions of disorder with reported levels
of fear of crime. This has obvious problems as a rigorous test of either perspective,
with no way to untangle how the two judgments are causally linked. As such, it is im-
possible to say with certainty whether it is perceptions of disorder that shape subse-
quent levels of fear or whether it is fear of crime that determines the significance of
disorderly cues present within the neighbourhood (Sampson and Raudenbush 1999;
Tseloni 2007). It also leaves open the possibility that the observed link between dis-
order and fear is an artefact of the data collection process, reflecting the presence of
unobserved external influences that shape levels of both fear of crime and percep-
tions of disorder.

This paper presents one of the first longitudinal explorations of the link between per-
ceived disorder and fear of crime, providing a clearer picture of how fear and disorder
are causally related. Using repeated measurements from the same individuals allows us
to examine how individual changes in fear of crime affect subsequent perceptions of the
extent of disorder, whilst also exploring whether changes in perceived disorder influence
individual concerns about their potential risk of crime. This also enables an ex-
amination of the extent that both fear and disorder are shaped by a common set of
external influences. The results confirm that perceptions of disorder do act to increase
subsequent fear of crime, lending support to the disorder perspective. However, they
also demonstrate a weak negative association between prior levels of fear and subse-
quent perceptions of disorder amongst younger people, suggesting that, for this group,
fear may actually serve to limit future perceptions of disorder, perhaps by restricting the
day-to-day activities of fearful individuals and limiting their exposure to low-level disor-
derly behaviour.

*The Disorder Perspective*

The most obvious and frequently cited mechanism linking disorder with fear posits that
visible and emblematic signs of disorder distort perceptions of risk and, consequently,
augment expressed fear. People first witness signs of low-level disorder within the local
area, before forming opinions about how much of a problem they are and what they
signify about the state of the local area. It is these internalized feelings about the extent
and nature of disorder that, in turn, manifest themselves in higher levels of fear or con-
cerns over personal safety.

The disorder perspective has received considerable academic attention, with Wilson
and Kelling’s (1982) influential ‘broken windows’ thesis the most prominent develop-
ment of the initial theory. Here, the important role that un repaired physical signs of
disorder play in eroding community trust and promoting further disorder is empha-
sized. Wilson and Kelling argued that this erosion of community bonds encourages ad-
ditional disorderly behaviour amongst residents by providing ‘cues’ to potential
offenders that disorder will be tolerated. At the same time, disorder discourages resi-
dents from intervening by fostering the belief that the local community is not well equip-
pred to deal with deviance. For Wilson and Kelling, then, disorder and fear were linked in
a feedback loop, with physical signs of disorder promoting increased fear, which, in turn, leads to more disorderly and deviant behaviour.\textsuperscript{1}

The notion that visual signs of neighbourhood disorder exert a direct influence on fear of crime has a good deal of \textit{prima facie} empirical support (see \textit{inter alia} Markowitz \textit{et al.} 2001; Robinson \textit{et al.} 2003; Taylor 2001; Wyant 2008). For example, using three years of data from the BCS aggregated to the neighbourhood level, Markowitz \textit{et al.} (2001) find a strong effect of disorder on fear, which they argue feeds back into increasing disorder in the neighbourhood. Controlling for neighbourhood crime rates, they find that the effect of disorder is significantly stronger than that of recorded crime. In a more recent study of 45 neighbourhoods in Philadelphia, Wyant (2008) also demonstrated a significant neighbourhood-level relationship between fear of criminal victimization and perceptions of low-level disorder, net of other neighbourhood characteristics, which he showed to be mediated through individual perceptions of risk.

Yet, the large majority of studies have relied on cross-sectional data. This makes it impossible to determine whether it is perceptions of disorder leading to heightened fear of crime, rather than fear of crime prompting subsequent concerns about disorder. Robinson \textit{et al.} (2003) provide the only longitudinal evidence to date that explores the link between perceptions of disorder and subsequent fear. Drawing on a two-wave panel study and using a multilevel modelling strategy, they demonstrate a strong association between prior perceptions of disorder and subsequent levels of worry about crime, which they argue is proof of a causal relationship (they also demonstrate a weak association with subsequent feelings of safety). However, despite the clear strengths of this study, they failed to allow for the possibility that fear might also be driving perceptions of disorder, with no causal pathway between prior fear and subsequent disorder. They also omit the possibility of common causes of both perceived disorder and fear of crime.

A handful of studies have used measures of disorder that are independent of the survey respondents who provided information on levels of fear to provide a more robust assessment of the disorder perspective. Drawing on data collected through systematic observation of social spaces (Perkins and Taylor 1996; Sampson 2009; Sampson and Raudenbush 2004; Taylor 2001; Taylor and Covington 1993) or utilizing interviewer assessments of the levels of disorder within the area (Taub \textit{et al.} 1984; Brunton-Smith and Sturgis 2011), these studies have identified a considerably weaker relationship with fear of crime. This weak association with more objective measures of disorder, further calls into question the claims of the disorder perspective, leaving open the strong possibility that there are other mechanisms through which disorder and fear of crime might be linked (Perkins and Taylor 1996; Taylor 2001).

\textit{Interpreting Ambiguous Disorderly Cues}

There is now a growing body of research focusing on the contingent nature of perceptions of disorder and the extent that different individuals interpret disorderly signals in the local area as problematic (Spelman 2004). Research evidence first pointed to considerable variability in perceptions of disorder from individuals who share the same local

\textsuperscript{1This theory has since formed the basis of Innes’s (2004) ‘signal crimes perspective’, in which he explores the symbolic function of specific disorderly cues that come to be imbued with particular significance by local residents, signalling to them potential future risk of victimization.}
environment, demonstrating that perceptions are driven by more than simply the objective incidence of disorder within the local area (see, e.g. Carvalho and Lewis 2003; Franzini et al. 2008; Jackson 2004; Sampson and Raudenbush 2004; Twigg et al. 2010). This has led researchers to explore the range of other drivers of individual perceptions. For example, Sampson and Raudenbush (2004) demonstrated that perceptions of disorder amongst US citizens were partly driven by commonly held stereotypes about problematic local communities. Focusing specifically on racial prejudices and concerns linked to socio-economic disadvantage, Sampson and Raudenbush (2004) highlighted the contingent nature of individual perception.

Within the UK context, Jackson (2004) highlights the importance of vulnerability and broader social attitudes in shaping perceptions of disorder. Adopting a social–psychological framework, he explores how these existing attitudes ‘frame and shape how individuals make sense of their immediate environment’ (Jackson 2004: 951). Finding higher perceived disorder amongst individuals who hold more authoritarian views about law and order and those who were concerned about long-term community deterioration, Jackson emphasizes the broader social meaning that disorder has for individuals (including concerns about diversity and the breakdown of community cohesion). Whilst not directly discussed in the fear-of-crime literature, this contingent nature of individual perceptions leaves open the strong possibility that fear of crime might also act as a driver of perceived disorder, which, in turn, may further sensitize individuals to local environmental cues and thus increase the likelihood that individuals will define disorderly behaviour as problematic (Jackson et al. 2010). From this perspective, it is not just the presence of disorderly cues that is important, but also their significance, and this significance is driven by individually held concerns about their potential risk of victimization. Those people who are more fearful of victimization are not just more aware of their local surroundings; they are also more likely to interpret the presence of teenagers and other signs of low-level disorder as problematic because of the associated possibility that they might be victimized.

**Common Causes of Disorder and Fear of Crime**

An alternative explanation for the observed correlations between fear and perceptions of disorder is that they are co-determined by unobserved variables (Tseloni 2007). Given the reliance on cross-sectional data, it is possible that any observed correlation is actually a reflection of them both being embedded within the same measurement procedure, with respondents aligning their assessments of disorder, either consciously or unconsciously, with their expressed level of fear (Brunton-Smith and Sturgis 2011). There is good reason to believe that this might be the case, with studies of both fear of crime and perceptions of disorder regularly reporting associations with the same series of contextual and individual variables including prior victimization experience, individual feelings of vulnerability, neighbourhood levels of crime and ethnic heterogeneity (see, e.g. Farrall et al. 2009; Jackson et al. 2010; Sampson and Raudenbush 2004; Twigg et al. 2010).

To date, Tseloni (2007) provides the only empirical evidence of the extent that fear of crime and perceptions of disorder might be co-determined. Using a simultaneous equation approach, she treats fear and disorder as two linked dependent variables sharing similar causes (she also links in levels of crime, although finds this to be less closely
related to fear and disorder). Incorporating basic structural variations between local areas, she accounts for a large proportion of the correlation between disorder and fear, providing strong initial evidence that the two measures share similar determinants. She also notes a considerable remaining correlation between disorder and fear, pointing to the possible existence of further unobserved influences. However, Tseloni is again restricted to cross-sectional data, making it impossible to explore further the nature of the residual correlation. She is also restricted to aggregate-level data, leaving open the possibility that a different relationship is operating at the individual level.

**Hypotheses**

In summary, whilst the majority of recent research has suggested that perceptions of disorder result in subsequent fear of crime, there is a growing interest in the socially constructed nature of perceived disorder and the extent that fear of crime might be the lens through which disorderly cues are defined as problematic. The reliance of many studies on cross-sectional data from single samples of survey respondents and the weak link between independently measured signs of neighbourhood disorder and fear of crime reinforces this contention, whilst also leaving open the possibility that they are co-determined by external forces. These alternative mechanisms through which fear of crime and perceptions of disorder might be linked are specified more formally in the following testable hypotheses:

H1. There is a positive correlation between prior perceptions of disorder and current levels of fear.
H2. There is a positive correlation between prior levels of fear and current perceptions of disorder.
H3. Fear of crime and perceptions of disorder are co-determined by external influences.

**The Current Study**

To explore the relationship between fear of crime and perceptions of disorder in more detail, we draw on data from the Offending Crime and Justice Survey (OCJS). This is a nationally representative panel study of young people resident in England and Wales. By asking a cohort of people about their levels of fear and the extent they perceive disorder at multiple time points, for the first time, we are able to untangle the causal pathways through which fear and disorder are linked. This gives us a unique perspective on the complex interplay between perceptions of the local environment and judgments about possible risks of crime.

**Data**

The OCJS was originally commissioned by the Home Office as a self-reported offending survey (Hamlyn et al. 2003). Running for four years between 2002 and 2006, the study consists of a core panel sample of approximately 5,000 respondents aged 10–25 who were interviewed on four separate occasions. Crucially, at three of these time points (waves 2, 3 and 4), individuals were also fielded a series of questions about their levels
of fear and perceptions of low-level disorder, providing us with a unique resource to begin to unpick the complex relationship between fear and disorder.

The restriction of the sample to those aged 10–25 makes the OCJS quite different from the majority of nationally representative social surveys conducted in England and Wales (where sample ages typically range from 16 to 90+), opening up the possibility that the association between disorder and fear will be different from those based on the full age distribution. Whilst no evidence currently exists to suggest that the strength of the association between disorder and fear is moderated by age, and only weak evidence that age is a predictor of fear or disorder (see, e.g. Chaddee and Ditton 2003; Sampson and Raudenbush 2004), the inclusion of very young individuals in our sample makes it plausible that the relationship between disorder and fear will vary within our cohort. The lived experiences of those aged 10 years old seem likely to be very different from those aged 25, potentially manifesting in a different relationship between perceptions of disorder and fear. To allow for this possibility, we adopt a split sample design distinguishing those aged 10–15 and those aged 16–25 at the time of the initial interview (reflecting the typical lower age boundary of sample surveys). Here, the rationale is that those in the older cohort should more closely resemble the general population, whilst the experiences of younger individuals may differ systematically (perhaps because low-level signs of disorder have a different resonance, one that is not based on direct experience).

At each time point, there are relatively low levels of attrition from the core panel, with response rates of 82 per cent at the second wave, 84 per cent at wave 3 and 86 per cent at wave 4 (Hamlyn et al. 2005; Phelps et al. 2006; 2007). Across the three waves of data utilized in this analysis, this results in an analytic sample of 1,884 aged between 10 and 15, and 1,495 aged 16–25.

Measuring fear of crime and perceptions of disorder

Fear of crime is measured using three items assessing levels of ‘worry’ about different types of crime (all items are measured on a four-point Likert scale ranging from ‘not at all worried’ (1) to ‘very worried’ (4)):

1. How worried are you about your home being broken into and something stolen?
2. How worried are you about being mugged or robbed?
3. How worried are you about being physically attacked by strangers?

These three items were combined using an ordinal confirmatory factor analysis strategy (Muthén and Muthén 2007) to form a single latent measure of overall fear, with factor loadings of 0.71, 0.95 and 0.89 for each item, respectively (when assessed jointly across all three waves of data). Using a latent variable approach adjusts for measurement error present in these items, with each indicator assumed to be an imperfect measure of the underlying level of fear (Bollen 1989).

To measure perceptions of disorder, we combine data from six items measured as dichotomies between the presence (1) or absence (0) of different forms of disorderly behaviour:

1. noisy neighbours;
2. teenagers hanging around causing problems;
3. people sleeping rough on the streets or in other public places;
4. people being harassed in the street (because of their skin colour);
5. people using or selling drugs;
6. people being drunk or rowdy in public.

These items were combined following Item Response Theory (Boomsma et al. 2001) to form a single latent measure of disorder, with factor loadings of 0.45, 0.60, 0.54, 0.68, 0.80 and 0.76 for each item, respectively (Muthén and Muthén 2007). This is a variant on traditional measures that require respondents to indicate how much of a problem these forms of behaviour are within the local area. However, whilst we lose the fine-grained quantification of the meaning of low-level disorder for each individual, this still allows us to distinguish the extent that individuals do and do not perceive disorderly cues within the local environment.2

A crucial assumption of longitudinal modelling is that we are measuring the same constructs at each time point, with only their levels changing over time (Sturgis et al. 2004). To test this, the measurement equivalence properties of the two latent variables were assessed across time (Meredith 1993). This revealed that both fear of crime and perceived disorder exhibited equivalence over time when compared against an unconditional model (with a Chi^2/df difference test of 1.68).

**Cross-lagged panel models**

To model the relationship between fear of crime and perceptions of disorder, a cross-lagged panel design is adopted (Campbell and Kenny 1999; Finkel 1995). This explicitly models the pathways through which fear and disorder are linked over time, providing a direct test of their causal relationship. For simplicity, we present only the structural paths between fear and disorder (Figure 1); however, in reality, we are estimating these simultaneously with the latent measurement models outlined above. The factor loadings and thresholds for each observed indicator are constrained to equality over the three time points, ensuring equivalency over time (Meredith 1993).3 All models were fitted using the Mplus software package (Muthén and Muthén 2007).

Here, we assume that our measures of fear and disorder at time t are a function both their lagged value at time t-1 and the lagged value of the other latent construct measured at t-1 (the cross-lagged effect). In other words, an individual’s fear of crime will be influenced by their prior levels of fear (path \( \beta_f \), but may also be influenced by their perceptions of disorder at this earlier time point (path \( \beta_d \)). Similarly, the amount of disorder that an individual perceives in an area will be a function of both their prior levels of perceived disorder (path \( \beta_f \)) and their level of fear of crime at this earlier time (path \( \beta_d \)).

The pathways between the same latent construct at different time points represent the stability of each construct over time (also referred to as the autoregressive effect). Adjusting for these stability effects, the lagged effects (\( \beta_f \) and \( \beta_d \)) represent the extent

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2Reporting on results from a small pilot study, Sampson and Raudenbush (2004) demonstrate that the presence and significance of disorderly cues are largely synonymous when assessed using standard empirical measures; therefore, it is unlikely that this will have a large impact on results.

3The residual error for each indicator variable is also allowed to covary with itself across measurement occasions, which ensures estimates of the causal pathways are not biased upwards by shared measurement error (Williams and Podsakoff 1989).
that prior perceptions of disorder predict changes in fear and the extent that prior fear predicts changes in disorder. These path coefficients are constrained to be equal across waves, so that they represent the ‘average’ stability and lagged effects over the three-year duration of the panel (Sturgis et al. 2004). This reflects the assumption that these causal influences are likely to remain fairly stable over the relatively short time period between waves, rather than operating in a cyclical fashion (Gollob and Reichardt 1987).

To assess for the impact of unobserved variables that may be causing variations in both fear and disorder and adjust for potential omitted variable bias, the disturbance terms $\zeta_f$ and $\zeta_d$ for our two endogenous latent variables are allowed to covary at each time point (represented by the double headed arrow). The covariances between adjacent disturbance terms for the same endogenous variable were also tested, adjusting for the possibility of a stable unobserved cause of the variable in question (Sturgis et al. 2004). In practice, no significant correlations were evident between disturbance terms over time, so these additional parameters were omitted from the final model.

A number of time invariant and time varying control variables are also included. Alongside respondent gender and ethnicity, we include socio-economic status, length of residence and the extent of social networks (number of friends and family in the area).

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4These typically have little direct impact on the estimates of the lagged effects, but do further adjust the magnitude of the correlations between endogenous latent variables at each time point.
as time invariant controls at time 1. A measure of victimization experience in the last year is included at each time point, along with an indicator of whether the individual has themselves been involved in any forms of anti-social behaviour during the year. A measure identifying whether the individual regularly goes out in the evening is also included to allow for differing levels of exposure to disorderly cues within the area.

Results

Table 1 details the percentage of young people reporting high levels of perceived disorder or worry about crime across the three waves of data. Amongst both cohorts, worry about all three crime types is falling across all three time points. Twelve per cent of those aged 10–15 report feeling very worried about burglary at wave 1, falling to 6.4 per cent by wave 3. Higher proportions report being worried about mugging and physical attack (15.9 and 18.1 per cent, respectively), with both dropping by approximately 50 per cent by wave 3 (to 7.9 and 9.5 per cent). A similar picture is evident amongst the older cohort, although a smaller percentage of this group are initially identified as very worried about each crime type. Turning to perceptions of disorder, more notable differences are evident across the two age groups, with considerably more older participants reporting exposure to three or more disorderly cues in the last year (28.6 per cent in 2004 compared with 12.8 per cent of the younger sample). This is a large difference that likely reflects an increased opportunity for exposure to disorderly cues amongst the older age group, highlighting the importance of treating these two groups of individuals separately.

Table 2 includes estimates from the included time invariant and time varying controls. For both cohorts, the effects follow a similar pattern to those from existing literature, with lower levels of fear and perceived disorder amongst men and those of higher socio-economic status. Non-whites are identified as significantly more fearful than white respondents, although no equivalent differences in levels of perceived disorder are evident. The presence of more friends in the local area has a non-uniform effect on fear and disorder, with those with stronger friendship networks reporting significantly lower levels of fear, but an increased perception of disorder within the area. Turning to the time varying controls, fear and perceptions of disorder are significantly higher amongst those who have been a victim of crime at each time point. Those who are themselves

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**Table 1** Percentage reporting high level of perceived disorder or worry about crime

<table>
<thead>
<tr>
<th></th>
<th>Age 10–15</th>
<th>Age 16–25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceive high level of disorder</td>
<td>12.8</td>
<td>14.8</td>
</tr>
<tr>
<td>Very worried about being the victim of burglary</td>
<td>12.1</td>
<td>8.3</td>
</tr>
<tr>
<td>Very worried about being the victim of mugging</td>
<td>15.9</td>
<td>10.4</td>
</tr>
<tr>
<td>Very worried about being the victim of physical attack</td>
<td>18.1</td>
<td>12.2</td>
</tr>
</tbody>
</table>

*Note:* Three or more problems in local area.

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5Technically, it is possible for socio-economic status and extent of social networks to change over time. However, in practice, these remained largely stable across our sample; therefore, for simplicity, we assume stability. Length of residence also increases over time, but the rate of change is uniform across all respondents so does not contribute to the unexplained variance in disorder and fear at times 2 and 3.
involved in anti-social behaviour are identified as perceiving more low-level disorder within the local area, but are not identified as more or less fearful of crime. Finally, those who report regularly going out in the evening generally also report lower levels of fear at each time point (although the effect is only identified as significant amongst those in the older group).

To explore how individual perceptions have changed over time, Figures 2 and 3 include summary results from the longitudinal part of the model for the 16–25 and 10–15 cohorts, respectively. These detail the magnitude of the average stability and lagged coefficients for both disorder and fear of crime. They also include estimates of the covariances between the disturbance terms at each time point. For brevity, model thresholds, factor loadings and correlated errors for each survey item, as well as residual variances for the latent variables, have been omitted. Considering the overall fit of the model, standard goodness-of-fit measures are all well within acceptable limits (Bollen and Long 1993). As a result, there is good reason to believe that the models represent an appropriate simplification of the complex pattern of associations between fear of crime and perceptions of disorder.

These are available from the author on request.
Looking first at the relationship between prior perceptions of disorder and current assessments of fear, we find a consistent positive relationship across the three waves of data in both cohorts (0.072 for the older group and 0.071 amongst those aged 10–15). Perceiving more disorderly signs within the neighbourhood at an earlier time point leads to significantly higher levels of fear a year later. But the effect is relatively small when compared to many existing studies. This may reflect the high stability coefficients for fear (0.666/0.693) and disorder (0.759/0.788) between time points, indicating that levels of fear and disorder are generally stable over time, at least in the relatively short time frame of the current analysis. As a result, those judged to be more fearful of crime at a time 1 will also tend to be more fearful at subsequent measurement occasions and those reporting more signs of disorder at earlier time points will continue to report these as a problem when asked again.

The picture is less clear when considering the effect of prior levels of fear on subsequent perceptions of disorder. Looking first at those aged 16–25, no significant differences in perceptions of disorder are evident for those that were identified as more fearful at an earlier time point. As a result, it seems unlikely that fear of crime plays a central role in raising awareness of local environmental cues, at least when considered in the short term. In contrast, when considering the younger cohort, the effect of prior levels of fear on perceptions of disorder operates in the reverse direction to expectations (–0.041). Those who are initially more fearful will actually see less disorderly problems in the local area when re-interviewed.

But what of the common cause model? The consistent effect of prior victimization experience on both fear and disorder demonstrates the existence of other common drivers of fear and disorder. In addition to this observed effect, the covariances between disturbance terms for fear and disorder at each time point highlight the existence of further common unobserved causes of both fear and disorder (with covariances of 0.083, 0.034 and 0.54 for those aged 16–25, and 0.091, 0.027 and 0.062 for those aged 10–15). Following previous literature, this might reflect assessments of the physical environment and neighbourhood cues including crime and objective levels of disorder (Brunton-Smith and Sturgis 2011; Jackson et al. 2010).
Discussion

This analysis provides an important insight into the directional nature of the relationship between fear of crime and perceptions of disorder, with the panel design enabling the empirical assessment of the causal pathways through which fear and disorder are related. This reveals that levels of fear are indeed driven, at least in part, by individual perceptions of the extent of low-level disorder in the area, with increases in the extent of disorder that people witness resulting in higher levels of fear. That the effect is so consistent across the cohorts suggests that the impact of perceived disorder on fear is stable across the age distribution and, consequently, we might reasonably expect to see a similar relationship if data were available from those older than 25.

In contrast, we find no evidence for the alternative pathway. In the short term at least, fear of crime does not serve to raise the salience of ambiguous neighbourhood cues. In fact, for younger respondents, the effect even operates in the opposite direction, with those who are more fearful of crime subsequently perceiving fewer disorderly problems in the local area. While it is difficult to draw too many conclusions about this observed negative relationship from the current data, one plausible explanation can be found in existing fear-of-crime literature. Research focusing on the impact of fear of crime has suggested that higher levels of fear are associated with a greater tendency for individuals to withdraw themselves from community life, ultimately resulting in the atomization of local communities (Hale 1996). People adjust their behaviour to avoid fear-inducing local areas and restrict their movements at particular times of the day (Adams and Serpe 2000; Woldoff 2006). By limiting their exposure to risky situations, ceteris paribus these individuals may also be restricting their exposure to disorderly behaviours, leading them to report observing less disorderly behaviours at subsequent interviews. Returning to the wording of our disorder indicators, this mechanism seems plausible, with respondents required to indicate the presence or absence of each form of disorder within the local area, rather than provide a value judgment about it.

These results also identify a substantial residual correlation between disorder and fear, pointing to the existence of common unobserved causes of both constructs. With more detailed information about the broader environmental context in which both fear and
disorder are experienced, it would be possible to explore in more detail the nature of these common causes. Existing research has demonstrated the existence of links between objective signs of neighbourhood disorder and perceptions of disorder and fear, as well as levels of recorded crime and the structural characteristics of the environment (Brunton-Smith and Sturgis 2011; Farrall et al. 2009; Sampson and Raudenbush 2004; Taylor 2001). Incorporating these alongside longitudinal data on fear and disorder would allow researchers to explore in depth how people come to conclusions about the nature of disorder in the local environment and the extent that this impacts on assessments of risk.

However, this study is not without its limitations. The OCJS was conducted over a relatively short time period with the three waves of data used in the current analysis each a year apart. Whilst this has some clear advantages for limiting the extent that changes in the broader environmental context might contribute to differences in both fear and disorder (we might expect higher correlations between disturbance terms if data were taken at greater intervals), it also means that there is relatively little residual variation in fear and disorder between each time point. Over a longer time period, environmental conditions may be expected to change more, potentially leading to more noticeable shifts in perceptions of disorder and levels of fear. With more waves of data, more complex patterns of association between fear and disorder could also be examined, rather than restricting the focus to examinations of average effects. The restriction to those aged 10–25 also makes it difficult to draw inferences to the wider population. Despite identifying a reasonably high level of consistency in the nature of the relationship between fear and disorder across the age range, the possibility remains that, over the life course, the salience of disorderly cues in the environment may change or that concerns about potential victimization may take on additional significance.

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