

PATHWAYS

**Research
on Pathways
to Desistance**

Volume 19

In this edition of the Pathways newsletter, we summarize a recent publication by Pathways Study investigators related to the “age-crime curve” – the observation that criminal behavior increases in adolescence and decreases in adulthood. The article resurrects a controversial hypothesis which posits that desistance is a product of age...youth will desist from offending simply because they reach a pivotal age...and this is consistent across youth and for all crime types. In the article, the authors describe their attempts to refute this hypothesis using the rich data available in the Pathways study. We invite you to read our summary of this captivating work.

Source article: Sweeten, G., Piquero, A.R., & Steinberg, L. (2013) Age & The Explanation of Crime, Revisited. Journal of Youth and Adolescents, 42(6), 921-938.

Is Desistance Just a Waiting Game?

Age is one of the most consistent correlates of criminal behavior. It is well established that antisocial and criminal activity increases during adolescence, peaks around age 17 (with the peak somewhat earlier for property than for violent crime), and declines as individuals enter adulthood (see figure 1). Evidence for this “age-crime curve” has been found across samples that vary in their ethnicity, national origin, and historical era (Farrington, 1986; Farrington et al., 2013; Piquero et al., 2003; Piquero et al., 2007).

Explanations for this relationship are varied

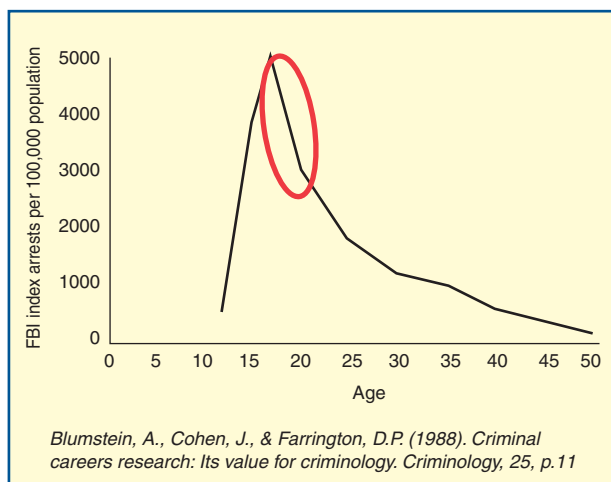


Figure 1: Age-specific crime rate

and conflicting. Developmental theorists point to a multitude of sociological, psychological, and biological changes that occur during adolescence and adulthood, and argue that these changes drive the drop in crime. However, one prominent criminological perspective outlined by Hirschi and Gottfredson (1983) claims that age has a direct effect on crime. The replication of this relationship across time, social contexts, demographic groups, and crime types led Hirschi and Gottfredson to conclude that the relationship between age and crime is

- *Invariant* – the age-crime curve doesn't change based on crime type or demographic group
- *Non-interactive* – the explanations for crime do not change with age
- *Inexplicable* - cannot be explained by sociological or psychological variables

Rather, they held that age has a direct effect on crime, attributing the decline to “the inexorable aging of the organism” (Gottfredson & Hirschi, 1990, p. 141). The claim has sparked intense debate regarding criminal careers and invigorated the growth of life-course criminology. Despite the attention this claim has

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received, however, few direct empirical tests of it have been conducted and no study to date has provided evidence to refute the theory.

Why does it matter?

The finality of the Hirschi & Gottfredson's claim is not simply academic discourse; if it is true that individuals will simply "age out of crime", then the fundamental premise of the juvenile justice system is called into question. In this framework, efforts by the juvenile system to intervene in the life of youth in order to stop offending behavior or hasten the decline would be futile; the system could therefore stop the practice of intervention and focus instead on retribution and incapacitation while waiting for time to pass.

Not so fast....

Since the Gottfredson & Hirschi theory emerged, various studies have examined aspects of their three-pronged hypothesis. This work has hinted that the story may not stop with age alone.

- Tests of the invariance hypothesis have produced evidence of variation in the shape of the age-crime curve for particular offenses or subpopulation and advances in statistical approaches (e.g., group-based trajectory analysis) have reinforced this notion
- Tests of the non-interactive hypothesis have produced evidence that some factors (e.g., employment, marriage) do have an influence on offending which varies with age
- Tests of the inexplicability hypothesis have indicated that, although no single variable could explain the age effect, theoretically relevant sets of variables (e.g., several measures of peer relations) could account for some of the reduction in offending with age

The last set of findings regarding the inexplicability hypothesis intrigued the Pathways study investigators, who recognized the opportunity to examine this issue in a sample



of serious offenders---which has never been assessed. One of the biggest strengths of the Pathways data is the breadth of theoretically-relevant sociological and psychological variables that are repeatedly measured in 10 waves across seven years. Unlike some of the previous studies, the investigators would be able to simultaneously assess the strength of constructs from a number of domains to account for the age-crime relationship. The opportunity to test this relationship among active offenders would also be a benefit since many community and school-based samples have very low rates of offending which reduces the ability of any of the constructs tested to explain variation (i.e., there just isn't that much variation to explain).

The study investigators used data from over 1,300 Pathways participants to test Hirschi & Gottfredson's claim that the age-crime curve cannot be explained by sociological or psychological variables. Specifically, they used multilevel longitudinal models to assess the extent to which the direct effects of age are reduced to statistical and substantive non-significance when constructs from a wide range of developmental and criminological theories are accounted for. The variables the investigators took into account represent differing theoretical perspectives regarding crime, including:

- social control- formal and informal controls account for crime (e.g., employment and marriage),

- procedural justice – people engage in crime because they have had a bad experience in the system which dampens their respect for “the law” (e.g., perceptions of the legitimacy and fairness of the legal system),
- social learning –people engage in crime because they associate with other people who commit crime (e.g., gang membership and exposure to antisocial peers),
- strain - social structures within society pressure individuals to commit crime (e.g., victimization and relationship breakup),
- psychosocial maturity- people engage in crime because they have not yet developed internal controls or an ability to see beyond themselves (e.g., impulse control, self-regulation and moral disengagement), and
- rational choice- youth engage in crime based on a rational consideration of factors such as potential benefits and costs (e.g., costs and rewards of crime).

First the authors looked to see how crime and age related to each other in the Pathways sample, without any other factors considered (see figure 2). This shows that the level of self-reported delinquency drops considerably as the Pathways sample ages, as would be expected.

The authors then looked to see if the variables from each of the six perspectives simultaneously influenced the “within person” variety of self-reported offending activities. That is, did changes over time for person X in variables related to social control influence the offending of person X? Did changes over time for person X in variables related to maturity influence the offending of person X? And so on.

What did they find?

A strict interpretation of the inexplicability hypothesis put forth by Hirschi & Gott-

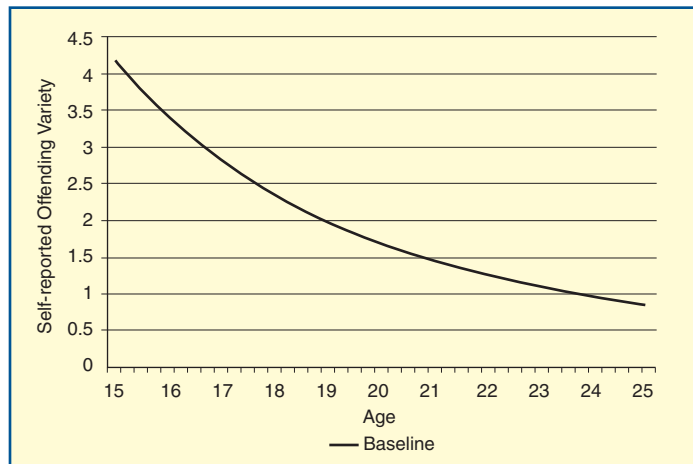
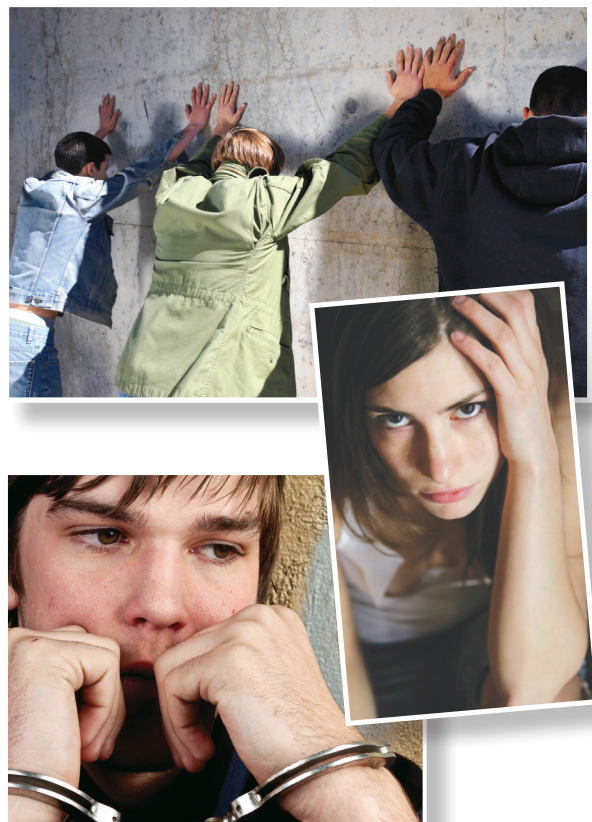


Figure 2: Average offending variety score at each wave: Pathways study participants

fredson would expect factors other than age to have no bearing on the drop-off in variety of offending (the number of distinct problem behaviors engaged in by the youth). The findings from the current study do not fully support this statement. On the contrary, the investigators found that variables from the 6 perspectives, assessed separately, explained anywhere from 3% (procedural justice) to 49% (social learn-



ing) of the age-crime relationship. And changes in variables across all perspectives, taken together, explained 69 percent of the drop in crime from ages 15 to 25.

To illustrate these findings, we present three figures. In figure 3, we see that the social control variables explain very little of the drop in crime. The solid line is again the curve of reported crime with nothing other than age considered. The dotted line represents the age-crime curve accounting for social control variables; it shows how much the curve shifts away from a straight “age explanation” when you consider the social control variables. Note that it is only slightly different than the solid line representing age alone; social control variables explain some of the age-crime curve, but not a lot. In contrast, figure 4 shows the influence of variables from the social learning perspective and here we see that the dotted line (which accounts for social learning variables) is quite distinct from the solid line representing age alone. The dotted line is now approaching the flat line (labeled “average”) which is what we’d expect if the age-crime curve is fully explained by the variables being assessed in addition to age. Finally, the last figure (figure 5) shows the age-crime curve when all variables across all perspectives are included. This picture shows an even greater difference in the age-crime curve when all variables are considered (as compared to age alone). The dotted line is more flat and the age-crime curve is closer to being fully explained (i.e. it is significantly closer to the “average” line).

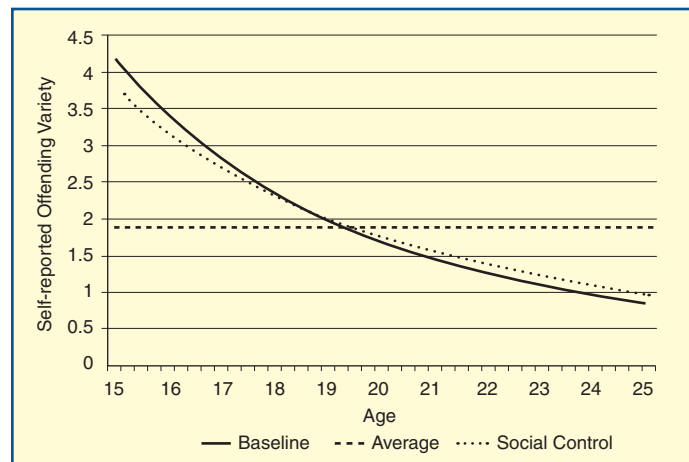


Figure 3: How social control variables influence the Pathways age-crime curve

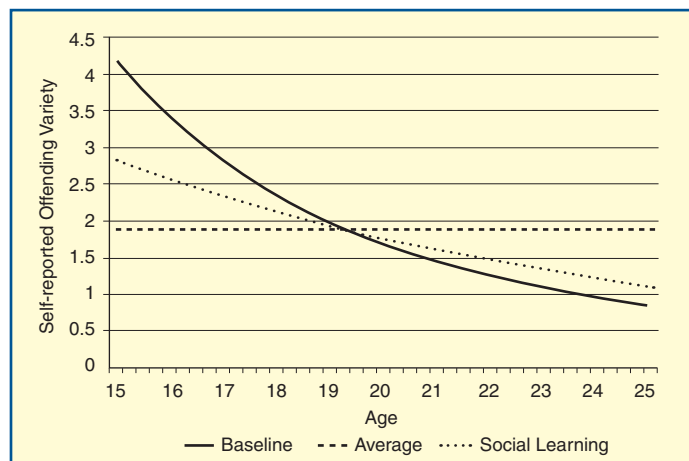


Figure 4: How social learning variables influence the Pathways age-crime study

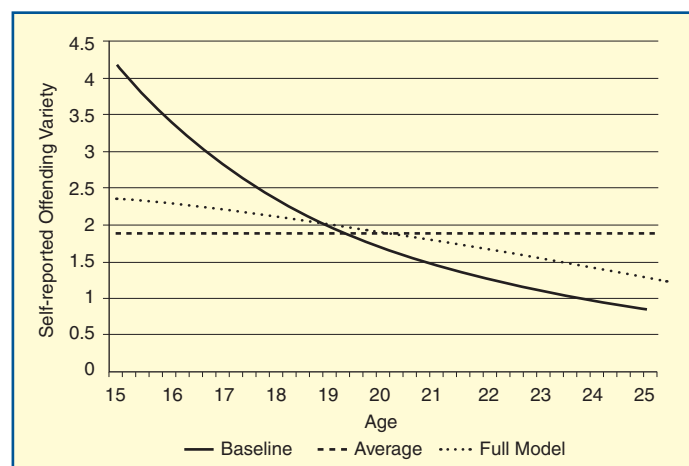


Figure 5: How all variables from all perspectives influence the Pathways age-crime curve

The authors conclude that the relationship between age and crime in adolescence and early adulthood is largely explainable, though not entirely, and attributable to multiple co-occurring developmental changes. They found the strongest explanation in the social learning variables (exposure to anti-social peers and antisocial peer pressure). Each of the six tested theoretical perspectives, however, had at least one variable that was a statistically significant predictor of the shift in the level of reported crime. Thus, the age-crime relationship cannot be reduced to a single theory or overarching construct. These findings also imply that efforts by the juvenile justice system to intervene in the lives of youth involved in crime indeed offer promise. This is a story of hope that interventions can have a positive, sizable effect.



References (all cited in source article):

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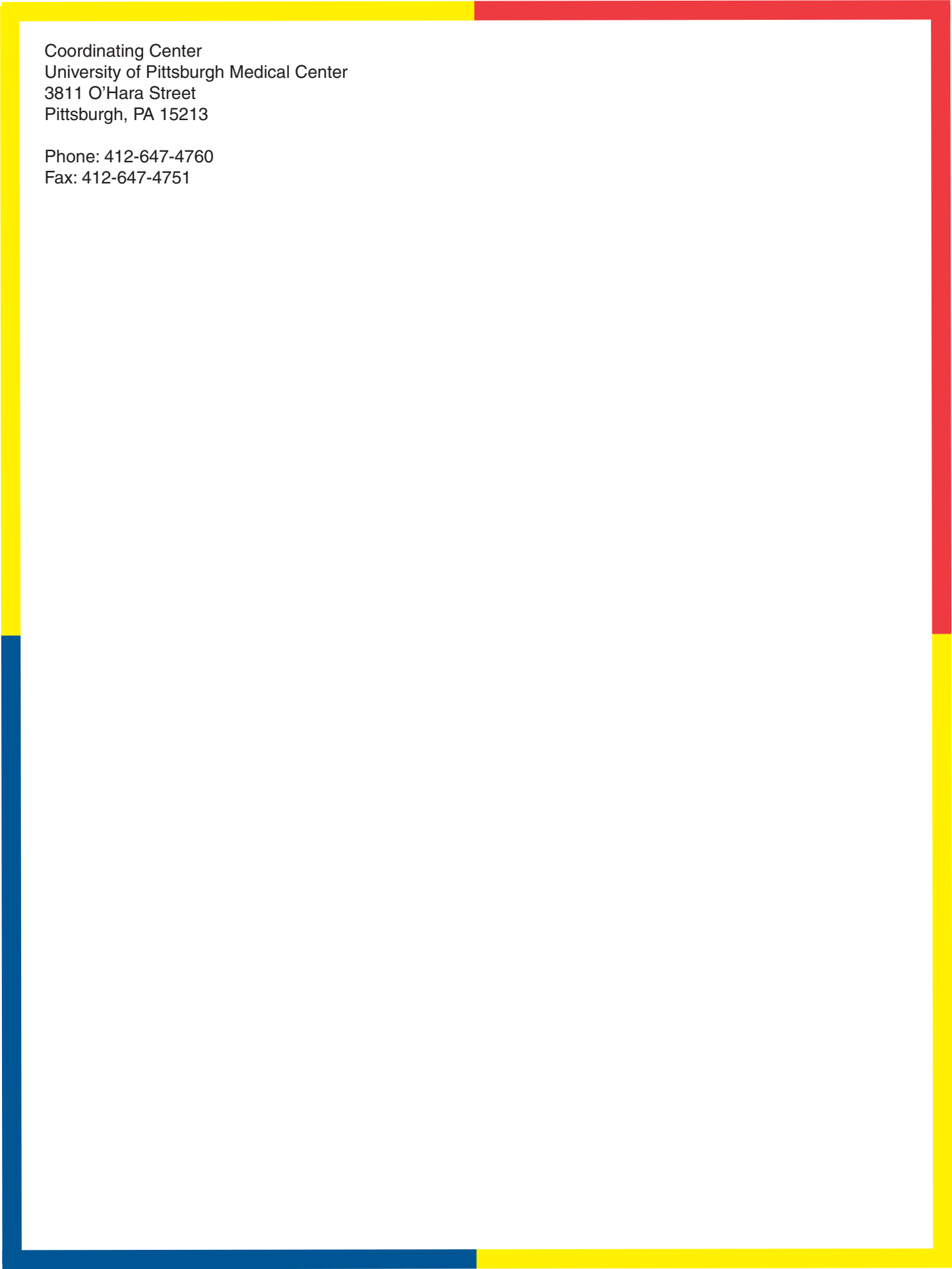


Would you like to access the Pathways study data?

The Pathways study data is available for use at the Interuniversity Consortium for Political and Social Research (ICPSR). Currently, the baseline subject and collateral data is available for public use as well as the time-point interview data. Some official record data (e.g. arrest) and the release interview data is available at the "restricted access" level. Below are links to each dataset on the ICPSR site.

- Baseline data: <http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/29961> or <http://dx.doi.org/10.3886/ICPSR29961.v1>
- Subject data: <http://dx.doi.org/10.3886/ICPSR29961>
- Collateral data: <http://dx.doi.org/10.3886/ICPSR32881> or <http://www.icpsr.umich.edu/icpsrweb/NAHDAP/studies/32881>
- Release interview data: <http://dx.doi.org/10.3886/ICPSR34488.v1> or <http://www.icpsr.umich.edu/icpsrweb/NAHDAP/studies/34488>
- Official record reports of petitions/arrest prior to and after the study baseline interview: <http://www.icpsr.umich.edu/icpsrweb/NAHDAP/studies/34605>

We anticipate the release of the life-calendar data and additional official record data in December, 2013. These will also be restricted access. Visit the ICPSR website for instructions regarding accessing restricted data: <http://www.icpsr.umich.edu>. Visit the Pathways website for more information regarding each of these data sources: www.pathwaysstudy.pitt.edu



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