A Framework to Assess the Harms of Crime

Letizia Paoli, Victoria A. Greenfield & Andries J. Zoutendijk
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In criminology and other disciplines very little effort has been made to identify, assess, and compare the harms associated with different crimes as distinct from the costs or perceived seriousness of crime. Crime has traditionally been considered a harm in its own right, with very few attempts to differentiate across categories. More recently, policy-makers in the United Kingdom, in other countries, and at the European Union level have resolved to use harm-based approaches to prioritize and target criminal activities, especially organized criminal activities.

Notwithstanding the growing policy interest, assessing the harms of crimes presents substantial conceptual and technical challenges. In this paper we address several of these challenges. Quite prominent among them, we note that harms cannot be framed on the basis of science alone. The identification of harms, as policy-relevant “harms,” is a normative decision. The questions of causality and attribution are also daunting. Moreover, many harms, once identified, are incommensurable.

We then present an analytical framework with which to address at least some of those challenges. This framework has three components: a taxonomy of harms, scales to categorize the incidence and severity of harms, and a harm assessment process, which traces the analytical steps necessary to implement the taxonomy and scales. We also identify the different policy goals that such a harm assessment can serve. Our conclusions are two-fold: it may be possible to reliably estimate some harms of criminal activities, but it is not possible—for both conceptual and technical reasons—to develop an encompassing estimate of the total harms of these activities.
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Introduction

One of criminology’s core aims—perhaps the central aim—has been to establish the causes of crime. In criminology and other disciplines very little effort has been made to identify, assess, and compare the impact and, specifically, the harms associated with different crimes as distinct from the cost or the perceived seriousness of crime. In the criminological as well as policy debate, crime traditionally has been considered a harm in its own right, with very few attempts to differentiate across categories. More recently, however, the reduction of harm has come to be seen as a valuable goal across many policy fields (see Sparrow, 2008), increasingly including crime control. Several national and regional agencies now call for law enforcement to prioritize and target criminal activities on the basis of the harms they produce.

Notwithstanding the growing policy interest, assessing the harms of crimes presents substantial conceptual and technical challenges. In this paper we first summarize the policy background (section 1) and then address several challenges, by reviewing the literature on the harms of crime and related concepts (section 2) and exploring the difficulties of assessing and comparing the harms of crime, as they emerge from the literature (section 3). We then develop an analytical framework with which to work through some of those difficulties (section 4), presenting a few examples from an application, namely, an ongoing assessment of wholesale cocaine trafficking (hereafter referred to as “cocaine trafficking”) in Belgium.1 Our application derives from a larger project on organized crime activities in Belgium intended to help policy-makers and law enforcement agencies establish strategic, long-term priorities in organized crime

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1 We define retail cocaine trafficking as “dealing.”
control.\textsuperscript{2,3} in addition to cocaine trafficking, we are also assessing the harms associated with human trafficking, VAT fraud, and tobacco smuggling and counterfeiting. The findings of this project will be discussed in detail elsewhere (e.g., Paoli, Zoutendijk and Greenfield, 2010).

1. The Policy Background

In a number of countries and at the European Union (EU) level, policy-makers have recently resolved to use harm-based approaches to prioritize and target (organized) criminal activities. The United Kingdom (UK) offers the clearest and most advanced example: “the overarching aim of the [Organised Crime] Control Strategy is to achieve a tangible and lasting reduction in the harm caused to the UK by organised crime” (SOCA, 2008: n.p.). Given this aim, the UK Serious Organized Crime Agency (SOCA, 2008) is developing a harm assessment framework, with which it can identify the most harmful criminal activities. The Australian Crime Commission also has begun producing an assessment of the harms arising from different criminal issues and the Canadian Criminal Intelligence Service is planning to do so (Tusikov, 2009). In addition, the Dutch Ministry of Justice has recently commissioned Dorn and van de Bunt (2010) to write a thought piece on the harms arising from organized crime.

At the EU level, the focus on harm is implicit in the partial shift from organized to serious crime: although the latter category is yet undefined and merely identified with a long list of offences, it clearly resonates with harm (Dorn, 2007). As early as 2002, Eurojust was set by the European Council, “with a view to reinforcing the fight against serious crime” (Council, 2002). In 2009, Europol’s mission was also enlarged to support law enforcement agencies of EU Member States not just in their fight against organized crime but “against international serious crime and terrorism” (Europol, 2010; see Council, 2009). The last EU multi-annual program for justice and home affairs, the so-called Stockholm Programme, which was adopted in 2009 and extends until 2014, also calls for the “protection against serious and organized crime” and for a selection of criminal phenomena to be tackled as a priority at the EU level. The criteria for such a

\textsuperscript{2} Our study is part of a larger three-year project entitled “Appraising the Dangerousness of Organized Crime” and funded by the Belgian Federal Science Policy Office.

\textsuperscript{3} Organized crime is a challenging concept in its own right. For a review of the debate on the meaning of organized crime, see Paoli and Fijnaut (2004) and Edwards and Levi (2009).
selection are not stated. On the basis of an implicit assessment of the harms they cause, however, the Council (2010: n.p.) has selected the following types of crime for special priority: trafficking in human beings, sexual exploitation of children and child pornography, cyber-crime, corruption, and drugs.

In the United States, organized crime is less prominent in the policy debate than in Europe, Canada or Australia (Paoli and Fijnaut, 2004) and no official attempt has been made to prioritize its control on the basis of harms. However, harm is not completely absent from the crime policy debate. According to Maltz (1990: 19), for example, the mandate of the Justice Department’s Organized Crime Strike Forces, which were abolished in 1989, was “to reduce the harm to the American public caused by organized crime.” In the late 1990s, a group of prominent scholars called for the development of a crime policy that would focus on minimizing harms, as opposed to exacting retribution, eliminating crime, or solving the social problems that generate criminal behavior (Rubin, 1999). More recently, Sherman also urged the development of a common metric of the harm of crime, arguing that “without such a metric of the varying costs of crime, analyses proceeds as if all crimes are of equal severity” (2007: 312).

On both sides of the Atlantic, harm plays a key role in critical criminology: some UK-based critical criminologists (Hillyard et al., 2004) have gone as far as to propose replacing the notion of crime with that of social harm and to make the reduction of social harm the key goal of broader social policy, not just crime control.

In several European and some non-European countries except for the United States, harm reduction programs have been built into national drug control strategies (EMCDDA, 2010). For the most part, the focus of attention has been on demand-oriented policy, but a handful of recent papers and studies suggest serious interest in supply-oriented applications of harm reduction principles. Some scholars have even recommended that the overall objective of drug policy be to minimize the total harm associated not just with drug consumption, but also with drug production, distribution, and control (e.g., Caulkins and Reuter, 1997 and 2009; see also Paoli, Greenfield and Reuter, 2009: 256-257). The 2005-2008 EU Action Plan to implement the 2005-2012 EU Drug Strategy explicitly endorses this standpoint, when it defines “its ultimate aim . . . to significantly reduce the prevalence of drug use among the population and to reduce the
social harm and health damage caused by the use of and trade in illicit drugs” (Council, 2005: 2). Other organizations have echoed this position. At least in principle, the UNODC (2009: 166) also advocates the idea of minimizing harm when it states: “Although entrenched markets may be difficult to disable, they can be guided by enforcement action so that they do the least possible damage.” The UK Drug Policy Commission (2009) recently called for refocusing law enforcement on the reduction of drug-related harms. Greenfield and Paoli (2010), noting that contemporary supply-oriented policy consists largely of supply reduction measures, consider whether harm reduction can support a unified approach to supply-oriented policy making, one capable of speaking more directly to policy goals than supply reduction.

2. The Harms of Crime and Related Concepts in the Literature

If at all, crime is defined in most penal codes or other official documents in formal terms as an act or omission in violation of a law with punishment annexed to it (for a historical review, see Eser, 1966: 344-366). Nonetheless, as Eser (1966: 363) maintains, “in one way or another, the requirement of harm is almost universally recognized as a material element of criminal law.” Harm constitutes “the very essence of crime” (ibid.: 345), “the fulcrum between criminal conduct and the punitive sanction” (Hall, 1960: 213): it is the harm imposed—i.e., the impairment of an interest deemed worthy of legal protection—that makes the perpetrator’s conduct sanctionable. In common law countries, the harm principle, defined in 1859 by John Stuart Mill in his famous essay “On Liberty,” has often been considered as the key, although not necessarily the only, criterion for legitimizing criminal law intervention: “the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others” (Mill, 1969: chapter 4).4,5

Despite the centrality of harm to crime, there has been little systematic reflection on the harms arising from crime and on how best to measure or assess them. Fifty years

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4 See Feinberg (1984) for a modern reinterpretation of the harm principle; for a critical discussion, see Baum, (1982).
5 In Europe and specifically in Germany, the slightly different, but functionally equivalent notion of Rechtsgut, that is, legally protected interest, has come to the fore (von Hirsch, 2003). Most commentators agree that “prohibiting with the threat of a sanction a conduct that does not impair a legally protected interest would be state terror” (Hassemer, 2003: 64; our translation).
ago Mueller (1959: 220) wrote that “the principle of harm is the most underdeveloped principle in our [U.S.] criminal law”—and the same can still be said today for criminology. A publication search in the criminological database, Criminal Justice Abstracts, using “harm” as a keyword yielded only 54 “hits” as of January 2010 for the period 1960-2009. All but one publication (Sherman, 2007) concerned “self harm”; that is, the harm some people impose on themselves via self-mutilation or suicide. In reality, a few more publications discuss the harms of crime and specifically organized crime but undoubtedly a very limited number of scholars have so far dissected or compared these harms. A considerable literature has instead developed on two related concepts, namely, the perceived seriousness of crime (that is, ordinary people’s perceptions of the seriousness of crime) and the monetary costs of crime. In a lively—and sometimes acrimonious—debate about harm reduction in the drug policy community, several scholars have proposed frameworks to classify drug-related harms. We review these literatures below, starting from the least closely related to the harms of crime.

2.1. Perceived Seriousness of Crime

Following the seminal research of Thorstein Sellin and Martin Wolfgang (1964), a number of predominantly North American studies have surveyed the perceived seriousness of crime. Typically, perceived seriousness is considered a function of the perceived consequences and perceived wrongfulness of an act (Stylianou, 2003: 42). This focus on harmfulness—termed “consequences”—and wrongfulness dates back to Warr (1989), who was the first to identify these two components of seriousness (see also O’Connell and Whelan, 1996: 299). Some consensus has been found in perceptions: persons of different socio-economic and cultural background within the societies surveyed tend, for example, to give similar rank-ordering to crimes (Stylianou, 2003).

Despite the relevance of harmfulness in people’s perceptions of seriousness, public opinion polls and surveys provide limited insight. The possibility of factual misjudgment and a lack of reflection on the criteria for judging known facts diminish the value of these instruments. First, people may believe that a crime involves greater risk of violence than it does or may underestimate the negative effects of other crimes. Second, in judging the harmfulness of a crime, they may refer only to some criteria, for instance, material damages, while neglecting some others, such as psychological damages (Von
According to Cohen (1988), U.S. public-perception surveys tend to underestimate the harm associated with violent crimes relative to property crime.

2.2. Costs of Crime

Estimates of the costs of crime date back to the 1931 Wickersham Commission in the United States. A large economic literature has developed since the 1970s. This literature traditionally distinguishes between three types of costs (Cohen, 2005: 9):

1. Those costs caused directly by criminal behavior;
2. Those costs incurred by society in response to crime either to deter or prevent future incidents or to exact retribution; and
3. Those costs incurred by the offender (such as the opportunity cost of the offender’s time while either engaging in the offense or being punished, if he or she otherwise could have been employed in productive activity).

The first category of the costs relates most closely to harms. According to Cohen (2005: 10-11), for example, this category entails, in no particular order of importance: productivity losses, medical and mental health care, direct property losses, indirect costs of victimizations, pain and suffering, loss of quality of life, loss of affection or enjoyment, death, and the legal costs of tort claims.

For this and the other two categories, the earlier studies—and the official government surveys—did not go beyond the out-of-pocket “tangible costs” of victimization. Beginning with Thaler (1981) there have been several attempts to include “intangible” or “non-monetary” costs, such as those associated with fear, pain, suffering, and lost quality of life. Several methods have been proposed since Thaler to estimate intangible costs (for a review, see Cohen, 2005). Phillips and Votey (1981) were the first to incorporate statistical value-of-life estimates into the cost of crime, combining them with crime seriousness rankings from public surveys. Cohen (1988) combined these estimates with monetary estimates of the pain, suffering, and lost quality of life for non-fatal injuries, using jury award data to assess the latter values. More recently, the cost-of-crime literature has imported “contingent valuation,” a methodology which involves asking potential victims how much they would be willing to pay to avoid the pain and suffering associated with a crime (Cohen et al., 2004; Dolan et al., 2005).
Each of these methods has its drawbacks (e.g., Cohen, 2005; Czabański, 2008). Standard methodologies to estimate the value of life, for example, focus on the present discounted value of expected future earnings. However, as most victims of violent crime are criminals themselves (see Fattah, 1992), this approach might lead to paradoxical conclusions: if illicit revenues are viewed as wholly “bad,” how do we calculate loss of life for someone whose future earnings are all illicit? Jury awards are ex-post compensations, designed to make a person whole, and are often regarded as unpredictable or unreasonably high. Willingness-to-pay depends on the wealth of the payee. These drawbacks have led some scholars (e.g., Zimring and Hawkins, 1995) to argue that the state of the art in economics has not developed to the point where we can adequately define the social costs of crime and measure them meaningfully.

Despite these drawbacks, this literature keeps growing (e.g., Czabański, 2008) and several scholars have attempted to estimate the cost of crime as a whole (e.g., Brand and Price, 2000; Mayhew, 2003), of organized crime (e.g., Dubourg and Prichard, 2007) or single criminal activities (e.g., Dolan and Peasgood, 2007) in a specific country and such estimates are frequently used in the policy debate, often with very little discussion about their limits and caveats (e.g., SOCA, 2009a: 7-13).6

2.3. Harms of Drug Use

In the drug policy community’s sometimes heated debate over harm reduction,7 several scholars have developed taxonomies and frameworks with which to assess drug-related harms, particularly as they pertain to drug use.

Newcombe (1992: 2-5) offers one of the first taxonomies of drug-related harms. It is a two-dimensional—“type” and “level”—matrix that accommodates the negative and positive consequences of drug use. His intent was to develop a simple theoretical framework and provide a “springboard” for follow-on efforts to both rank harm-reduction goals and measure the effectiveness of interventions aimed at achieving them. For “type,” he delineates among health (physical and psychological), social, and economic consequences; for “level,” he delineates among individual (user), community (family, friends, neighbors, and colleagues) and societal (the structures and organization of

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6 Several studies also attempt to estimate the costs of drug abuse. For a review, see Pacula et al. (2009).
7 We review this debate in detail in Greenfield and Paoli (2010).
society) consequences. He suggests that a better classification system would include time, duration, and scale and support quantification.

MacCoun and Reuter (2001: 105-112)\(^8\) construct a three-dimensional taxonomy of drug-related harms. They delineate among categories of harm (health, social and economic functioning, safety and public order, and criminal justice); bearers of harm (users, dealers, intimates, employers, neighborhood, and society); and primary sources of harm (use, illegal status, and enforcement). In seeking to identify the primary sources—or underlying causes—of harms, they recognize that harms might be related to drug use, but not necessarily caused by it. They initially consider four such causes, i.e., trafficking, illegality, enforcement, and use, but eventually exclude trafficking. Trafficking might be a proximate cause of harm, but it is not usually the underlying cause.

MacCoun and Reuter’s emphasis on “primary sources” suggests the importance of assessing not just the harms associated with a particular activity, but also the underlying causes of those harms, some of which might be a policy, program, or intervention. This approach opens the door to the explicit consideration of the unintended consequences of policy and policy measures and provides grounding for an evaluation of the effects of current and alternative policies and measures.

2.4. Harms of (Organized) Crime: The Academic Debate

Very few of the scholars who have advocated a harm-reduction approach in dealing with (organized) crime, have developed a robust taxonomy of harms. Rubin (1999) provides no specification. Hillyard and Tombs only make brief suggestions about the scope of a social harm approach (2004:??). Sherman (2007: 312) proposes the creation of a total harm index of past crime in specific contexts (e.g., a city), with a crude scaling of each crime event by the public opinion severity score for its legal category (e.g., robbery). Dorn and van de Bunt (2010) suggest that the harms of organized crime can be articulated along three dimensions: “hurts to victims,” “threats to public and private sector guardians” and “systemic damage.” For the hurts to victims though, they provide only a few examples but no typology, focusing primarily on monetary indicators—that is, costs—of harms (ibid.: 8-13). Their suggestion can also be criticized for including the

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\(^8\) MacCoun and Reuter (2001) reproduce the framework presented in MacCoun et al. (1996).
threats to guardians as a subcategory of harms. On the one hand, this choice might lead to double counting, when threat consists of “penetration”; that is, corruption of government officers. On the other hand, it is difficult to see how the two other subcategories of threat, that is “challenge” and “swamping”\(^9\) can be seen as a harm to government (ibid: 14-17). The category of systemic damage is also not detailed. Other scholars (e.g., Kopp and Besson, 2009; Levi and Burrows, 2008; Porteous, 1998) de facto equate the harm or impact of organized crime or a specific criminal activity with its social cost and, following this body of literature, also include the costs of societal reaction to crime.

We know only two scholarly attempts to categorize the harms of crime in detail. The first goes back to Maltz (1990), who tried to assess the harms of organized crime in the late 1980s in the United States. Maltz considers five different dimensions of harm, from the concrete to the abstract: physical, economic, psychological, community, and societal. He does not distinguish between the direct harms to victims of and participants in the organized crime activities and the less direct harms to society. For example, under the category of economic harm, he considers three different sets of harms:

1. The losses suffered by the victims, which he calls “first-order effects,” of the many crimes that are considered *mala in se* (conducts deemed inherently wrong or evil; e.g., murder, robbery, car theft, extortion, arson)

2. The “second-order effects” of *mala in se* crimes, a subcategory including events like bankruptcy, increased insurance premium, increased expenses for physical protection, or the impact of destroying a business on employees or a neighborhood’s economy, and

3. The economic gains to the organized crime enterprises of *mala prohibita* (conducts that are wrong because they are prohibited by statute; e.g., gambling, prostitution, drugs) (ibid.: 43).\(^{10}\)

Following the common categorizations of the time, Maltz considers the harms of many single organized crime activities: arson-for-profit, assault and murder, auto theft

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\(^{9}\) Dorn and Van de Bunt define challenge as “particular forms of technical advantage, social/linguistic/cultural distance, and/or innovations in modus vivendi” (2010:15). Under “swamping,” they understand “high numbers of offenders capable of swamping law enforcement agencies, even if they lack the ability to penetrate or challenge the police (ibid.: 16).

\(^{10}\) Whereas Maltz defines the economic gains to organized crime enterprises solely as a “harm,” we address some of the challenges of making this assignment in section 3.1.
and “chop shop,” distribution of illegal drugs, extortion and protection, illegal gambling, and public corruption. On the basis of his professional judgment and without a systematic scale, Maltz qualitatively assesses the harms of each activity, as reported in table 1.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Physical Harm</th>
<th>Economic Harm</th>
<th>Psychological Harm</th>
<th>Community Harm</th>
<th>Societal Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perm.</td>
<td>Temp.</td>
<td>Direct</td>
<td>Indirect</td>
<td>$ to OC</td>
</tr>
<tr>
<td>Arson for profit</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>-</td>
</tr>
<tr>
<td>Car theft/chop shop</td>
<td>**</td>
<td>**</td>
<td>*</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Drugs</td>
<td>?</td>
<td>?</td>
<td>*</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Extortion/Protection</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Illegal Gambling</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Public Corruption</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
<td>-</td>
</tr>
</tbody>
</table>

- Little or no harm is generated
*? Some harm of this type may be generated
* Some harm of this type is generated
** Significant harm of this type is generated
*** Very significant harm of this type is generated.

Source: Maltz, 1990: 60.

Although they are not taken into account in the empirical assessment, Maltz makes two interesting observations. First, not all the harms attributed to organized crime are intrinsically related to the illegal status of an activity (ibid.: 41): as shown by the case of gambling, this may cause substantial harm, even if it is legalized (e.g., Anielski and Braaten, 2008: 81-99). Second, labeling an activity “organized crime” can produce harms beyond the activity’s intrinsic harm, most prominently, the societal harm of lack of respect for the law and corruption of law enforcement officials (ibid.: 43; 47-48). We take these considerations into account in our harm assessment process, when we stress the importance of establishing causality.

Von Hirsch and Jareborg, two legal theorists, have carried out the most structured effort to categorize the harms of crime. Their article, “Gauging Criminal Harm: A Living Standard Analysis” (1991), is inspired by the assumption that the severity of punishment should depend principally on the gravity or seriousness of the offence—a pillar in “just
“desert” or “proportionalist” conceptions of sentencing—which, in turn, depends on a combination of “harm,” i.e., “being made worse off,” and “culpability” (ibid.: 2-3 and 11). Seeking to improve the basis for establishing criminal penalties, Von Hirsch and Jareborg identify a need for greater rigor in the discussion of seriousness. To that end, they focus on harm, specifically the damages associated with individual victimizing crimes, such as theft, burglary, and assault (ibid.: 3-4). They offer only general observations on other types of crime, including drug-related crime (ibid.: 32-35). The authors develop guidelines for assessing the standard impact that a crime has on the immediate victim’s standard of living—defined as the “economic means” and “non-economic capabilities” for achieving a certain quality of life (ibid.: 7 and 10-11).

Reflective of such means and capabilities, they posit four “generic-interest dimensions” (ibid: 19) upon which crime typically intrudes (i.e., physical integrity, material support and amenity, freedom from humiliation, and privacy or autonomy) and set up a scale, consisting of four living-standard levels (see table 2), to gauge the degree to which a given intrusion affects the individual’s living standard (ibid.: 17).

**Table 2. Von Hirsch and Jareborg’s Living-Standard Levels**

<table>
<thead>
<tr>
<th>Level</th>
<th>Category</th>
<th>General Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1′</td>
<td>Subsistence</td>
<td>Survival, but with maintenance of no more than elementary human capacities to function and no satisfactions presupposed</td>
</tr>
<tr>
<td>2′</td>
<td>Minimal well-being</td>
<td>Maintenance of a minimal level of comfort and dignity</td>
</tr>
<tr>
<td>3′</td>
<td>Adequate well-being</td>
<td>Maintenance of an ‘adequate’ level of comfort and dignity</td>
</tr>
<tr>
<td>4′</td>
<td>Enhanced well-being</td>
<td>Significant enhancement in quality-of-life above mere adequacy</td>
</tr>
</tbody>
</table>


As the final part of their apparatus, the authors introduce a harm scale, which includes five broad bands of gravity: grave, serious, upper-intermediate, lower-intermediate and lesser, where lesser means that the living standard is not affected or only marginally (ibid: 28-29). The first four bands, “grave” through “lower-intermediate,” map directly to the four living-standard levels. If a crime intrudes upon subsistence, it is rated as “grave.” Homicide, which destroys subsistence, provides one such example, albeit extreme. If a crime interferes with one’s enhanced well-being, it inflicts a “lower-intermediate” harm. At the farthest end of the scale, a crime such as petty theft, which does not encroach substantially at any level, would be deemed “lesser.”
In rating crime harms, von Hirsch and Jareborg aim to assess the impact of different crimes on a hypothetical victim, assumed to have interests at each living-standard level (ibid.: 21). They apply their living standard judgments to the overall quality of someone’s life, implying a longer temporal perspective than the highly variable quality of daily experience. Von Hirsch and Jareborg recommend one year or perhaps even a slightly longer duration (ibid.: 21-22). From such a perspective, they also consider the question of replacement: if an offence damages or destroys an interest that can be readily replaced, then the harm should be measured by the impact on the living standard of incurring the replacement (ibid: 22).¹¹

Other legal theorists (e.g., Ryberg, 2003: 62-68) have raised a series of criticisms about the von Hirsch and Jareborg’s approach. The most relevant for us is that they lack a clear concept of probability (ibid.: 66). For our purposes, the most obvious limit of the von Hirsch and Jareborg’s approach is that it concerns only what they call “ordinary victimizing offences.” Nonetheless, we draw heavily from their work.

2.5. Harms of (Organized) Crime: Government Reports
Several government agencies have recently produced reports aiming to list and assess the harms arising from organized crime. Reflecting the Organized Crime Control Strategy goals, the UK SOCA has published different versions of a harm framework for serious organised crime that addresses both the types and the bearers of harms. In the original 2008 version, SOCA (2008) delineates among physical, social, environmental, economic, and structural harms; it further delineates among individual/local, community/region, and UK/international harms. SOCA (2009a: 9), in contrast, delineates among harms to individuals, businesses, and society. In both versions, SOCA includes “harms [that] are the direct and immediate results of specific serious organised criminal activities” and “others [that] are wholly or partially the consequences or long-term effect of such activities” (SOCA, 2009b: 32). It also considers response costs, i.e., the costs of law enforcement and health services for criminals and victims.

¹¹ Von Hirsch and Jareborg also deal with attempted crime, by incorporating risk judgments in the guidelines. They suggest, in particular, a two-step procedure. First, one should determine the living-standard level that would have been affected by the completed crime. Second, the net harm is estimated by risk-adjusting the harm identified as a step one (ibid.: 30).
The SOCA Director admits that “while defining harm is difficult, measuring it is at least as great a challenge” (SOCA, 2008: n.p.) and basically presents the framework as a work-in-progress. SOCA has not yet provided instructions for implementing the framework. It assesses some types of harm for several organized crime activities, but the framework does not distinguish among the different activities and offers descriptive examples of many in the same box (SOCA, 2008; 2009a and b).

Several other policy agencies in the UK and elsewhere (e.g., UK National Strategic Assessment and London Metropolitan Police Service and Australian Crime Commission) have developed methodologies to assess—and quantify—the harms associated with organized and other criminal activities or even specific criminal groups. These methods have not been published but they are discussed in a recent paper by Tusikov (2009), a Canadian intelligence analyst with access to restricted sources. While macro-analyses focusing on the harms of criminal activities may inform the selection of strategic priorities, the assessment of the harms “produced” by single organized crime groups aims to support the definition of short-term operational priorities.

All these quantitative exercises can be criticized for the inevitable limitations of attempting to represent both the severity and frequency of harm in terms of a single quantitative score (see the later discussion, in section 3.5, regarding commensurability and scalars). Moreover, a serious conceptual problem affects the ACC’s macro-level harm analysis and the NPIA’s Organized Crime Group Mapping. Namely, both methods assign scores to either issues or networks on the basis of categories that are not related to harm. The NPIA, for example, delineates six different categories, out of which only three, partially overlapping, specifically focus on harm: potential or actual injuries (including psychological effects); community harm (including offenses recorded, property losses, fear of crime); and economic effect in a specific context. The three other issues considered—the network’s criminal capability; its impact on police reputation at the community level; and the spread of network activities across agency responsibilities and boundaries—have nothing to do with harm, as such.

For the distinction between “strategic” and “operational” law enforcement priorities and crime analyses, see Osborne and Wernicke (2003).
3. The Challenges of Assessing the Harms of Criminal Activities

On the basis of this literature review, we have identified five major challenges in assessing the harms of criminal activities: the first three are primarily conceptual; the latter two are primarily technical, albeit with some conceptual basis.

3.1. Morality, Cultural Variability, and Subjectivity

The decision to label something as a “harm” is a normative decision that cannot be made on the basis of scientific evidence alone. Should harms to criminals, particularly those sustained in the commission of the criminal act, be included among the harms of the activity? A body-packing drug courier might overdose; a wholesaler might beat a retailer. One might argue against inclusion, e.g., on the basis of free will, but the lines between perpetrator and victim are not always clear. Moreover, many crime and drug control policies are intended to minimize the harms to the physical integrity of all participants in a criminal activity, regardless of their role in the crime. As Fischhoff (1984: 123) argues for risk, “the choice of definition is a political one, expressing someone’s views regarding the importance of different adverse consequences in a particular situation. Such determinations should not be the exclusive province of scientists, who have no special insights into what society should value” (see also von Hirsch and Jareborg, 1991: 5-6 and Rossi et al. 1974: 224).

Not just the harms, but the criminal acts themselves, cannot be assessed without making references to a culturally-based system of values. This is particularly true for what common criminal law terms *mala prohibita* conducts that are wrong only because they are prohibited, as opposed to the *mala in se*, which are considered inherently wrong or evil (e.g., *Colombia Law Review*, 1930).

Even within the same value system, the consideration of the specific consequences of a criminal conduct as harmful is inherently subjective. Take, for

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14 Although it does not explicitly mention harm, a five-step risk management process found in the national security literature and widely used by the U.S. military also bears relevance to our efforts (Department of the Army, 1998 and 2006). Greenfield and Camm (2005) describe this tool at length. Greenfield and Paoli (2010) discuss its potential in assessing the severity and incidence of drug-related harm.

15 Body packing refers to the practice of ingesting drugs to conceal them during transport.

16 One might argue for an externalities-based definition of “harm,” limiting the analysis to the harms born by parties who are not directly—and willingly—involved in the criminal act; however, in at least some instances, “willingness” is a matter of degree. We address this issue below.
example, the illegal revenues generated by many criminal activities, particularly those considered typical of organized crime, such as trafficking in drugs or human beings. These revenues are in most cases the main goal and reward of an activity—and thus a benefit, not a harm for the participants. However, these same revenues are considered one of the most serious adverse consequences of the criminal activities by policy-makers and law enforcement agencies. (Corrupt civil servants may also profit from these revenues, if they pocket bribes.) The opinions of single offenders may not be decisive; nevertheless, the revenues of many criminal activities fuel consumption, thus representing a benefit for many legitimate retailers and service-providers; in a few extreme cases, the revenues may provide an additional income, or indeed means of survival, for a considerable fraction of the general population.

In the case of Tajikistan, for example, Paoli, Greenfield and Reuter (2009) estimate that the revenues of illicit heroin trafficking might have amounted to at least 30% of the nation’s legitimate economic activity at the start of the 21st century. This means that, if heroin trafficking were uprooted suddenly, many Tajik citizens—most of whom are not personally involved in drug trafficking—would feel the loss. Losses might be more heavily concentrated in some localities and among some entrepreneurs and employees, such as those in the building sector, that typically service drug traffickers. In developed countries and specifically Belgium, our country of reference, the benefits of organized crime and, more generally, criminal activities are unlikely to be as important to the economy or distributed across as large a share of the population, either nationally or locally. Nonetheless, the extreme example of Tajikistan demonstrates that no list of harms can be completely objective or value-free.

These considerations might be new in the field of criminology, including organized crime research, but they are well-known in other fields. In the harm reduction literature on drug use, for example, many authors point to the inherent subjectivity of decisions about the identification, attribution, measurement, and prioritization of harms (e.g., Newcombe, 1992; Caulkins and Reuter, 1997; and Riley et al., 1999).

3.2. Problems of Infinitude, Standardization and Causality
In creating a list of harms, we may strive for breadth and inclusivity, but we cannot be exhaustive. First, one cannot identify and assess all harms a priori and, second, the list
could go on forever if one includes ancillary effects. This leaves us with a question of
scope: how inclusive should the list be? With some irony, Levi and Burrows (2008: 294)
ask whether the production of their own paper on fraud “and the whole of the
criminological estate” should be defined as a cost of crime. Without irony, Ryberg (2003:
66) asks whether to include the harm to relatives of homicide victims.

A concomitant problem concerns the difficulties but at the same time the
necessity of standardization. The hurtfulness of a crime depends on the specific situation
of the victim and the situation one victim may differ greatly from that of another. A
person who is physically, psychologically or socially vulnerable may suffer more harm
from the same crime than someone who is more resilient. And, even if the initial intensity
of the harm is the same, one victim may suffer the harm much longer than another victim.
Take, for example, the case of a woman who is sold into prostitution for a short period of
time. She may overcome the trauma of trafficking and prostitution sooner, if she is
healthy and can rely on a trusted and supportive social network of friends or relatives or
on the services of non-governmental organizations (NGOs). The same crime may have
more devastating and much longer-lived consequences for a person who has become
infected with HIV or does not have the same psychological or social resources available.
However, no empirical study can fully assess the harms to each individual victim, not
least because some harms may be realized far into the future. A full assessment of the
harms caused to individuals by criminal activities would be possible only if all victims
were traced, interviewed, or monitored over a number of years. Some form of
standardization, at least for individual victims, thus seems unavoidable.

Causality, which Ryberg (2003: 64-65) refers to as the problem of “remote
harms,” presents a related challenge. Remote harms are not just spatially-temporally
distant but also stand in such a relation to a conduct that it is not clear whether they
should be ascribed to that conduct. One example is a conduct, such as drug trafficking,
which triggers a series of events that eventually have harmful consequences, in part,
because of the intervening choices of the agent and others. There is no doubt that drug
use can hurt users and the rest of society: most prominently, drug users who become
addicted to cocaine and other hard drugs suffer from deteriorating health. However, drug
use results from a series of choices, including those of the user him- or herself, over
which wholesale traffickers have no control. Von Hirsch and Jareborg (1991: 33-34) view the case of drug trafficking as especially problematic because the injury occurs only through the consent of the final users (the alleged victims), which usually eliminates criminal liability as a rule, unless minors are involved.

The potential for “accumulative harm” adds another complication. Some harm follows from an act only when it is combined with the similar actions of others (ibid.: 66). It is hard to claim, for instance, that any single case of VAT fraud represents a significant harm to state coffers or, more precisely, triggers a significant loss of the social services that might have been paid with the tax revenues. If VAT and other tax frauds were widespread, though, their impact could be more important even if that impact remains minimal vis-à-vis the total state budget. In the cost-of crime literature, these accumulative harms, once monetized, are sometimes called “indirect costs” and cannot be attributed to any particular offender (see Cohen, 2005: 26).

The theoretical and practical question then is: How much of the harm that is triggered by a conduct should be attributed to the original conduct? Again this is not a question that can be solved on the basis of scientific reasoning alone.

3.3. Gross v. Net Harms
Some criminal activities may yield direct or indirect benefits that “countervail” harms. The above-mentioned heroin-trafficking revenues flowing into the Tajik economy are a good example, as are the opium revenues accruing to Afghan farmers with few legitimate income-earning opportunities. Drug users might also derive benefits (e.g., relaxation) from their drug consumption and these benefits might constitute their primary reason for consumption. In assessing the costs of drug abuse, some scholars subtract the benefits of drug use from their final cost estimates. For examples of this approach, see the discussions of Collins and Lapsley (2002), analysing Australia, and Rehm et al. (2007), analysing Canada, in Pacula et al. (2009: 81). Following this reasoning, we might ask if, after accepting a causal link between drug trafficking and use, we should include the benefits of drugs use as negative harms and subtract them from the total harms of drug
trafficking? In the economics literature, this question would be framed in terms of gross or net harms, with the latter being the gross less the benefits.17

3.4. Quantification
Quantification poses substantial challenges. As several scholars considering crime- and drug-related costs and harms have noted (e.g., Brand and Price, 2000: x; Caulkins and Reuter, 1997: 1147; MacCoun et al., 2001; Kopp and Besson, 2009; Tusikov, 2009), data are not readily available and problems of measurement abound. We might be able to conceptualize a basis for quantification, such as “value of life” or “willingness to pay,” 18 but still lack the data or other technical means to quantify a harm accurately, if at all. Consider the relatively simple case of the harm to a business’ reputation resulting from its employees’ involvement in a drug trafficking operation. In this case, one might seek to assess the effect of a trafficking incident on the value of the business. One might look to a change in the business’ stock price, if available, but, how much of the change should one attribute to the illicit involvement? A variety of statistical methods might be brought to bear in the assessment, but would such an assessment be feasible?

Moreover, as the example of gross and net harms demonstrates, concerns about measurement are not wholly technical; they are also “normative.” For example, should the value of life be measured on the basis of income earning potential, the most common methodology in the cost-of-crime literature—what would that mean for a victim of human trafficking, whose income earning potential in his or her home country might be meager, but whose income earning potential in his or her newly “adopted” country is substantially higher, albeit garnered by others and illegally earned?

3.5. Incommensurability

17 Human smuggling provides the best example of a criminal activity that produces large and nearly indisputable benefits. With no distinction between documented and undocumented migrants, a considerable fraction of whom entered their host countries thanks of the services of human smugglers, the World Bank (Ratham, Mohapatra and Silwal. 2009) estimates that in 2008 migrants sent $328 billion in remittances to their families in developing countries. This sum is more than double the $120 billion in aid that flows from OECD members. According to the UNDP (2009: 49-68) the benefits to human welfare exceed those of the migrant’s remittances. By crossing a border, most migrants find a richer, longer, healthier, and better-educated life than they would have had otherwise. These benefits accrue even if the migrant received criminal help from a “snakehead”—as smugglers are called in China—or their equivalents elsewhere, thus leading some migrants to willingly and sometimes gratefully choose this route (e.g., Chin, 2000).

18 See section 2.2, for a discussion of some of the weaknesses of these approaches.
Many different types of harms are incommensurable; that is, they cannot be measured or compared by a common standard. It is not possible to report a single, comprehensive measure of crime-related harms that include the loss of life, government integrity, or environmental quality.\(^{19}\) Some elements of each harm might be amenable to quantification by a common means, such as monetization, but not all. Comparisons of harms across categories of bearers, e.g., individuals, businesses, governments, and the environment, pose special challenges insomuch as it might be possible to develop an internally consistent measure of harm within each category—such as von Hirsch and Jarborg’s “standard of living” for individual victims of crime—that circumvents many of the conceptual and technical challenges noted already, but that measure might hold little meaning across categories. It might even be possible to develop an appropriate “standard of living” analogy for other bearers, as we suggest in section 4.2, but the analogies would be of limited use in a cross-category comparison. No purely scientific procedure will enable us to establish whether the corruption of government employees produces harms of greater severity than violence against individuals.

Ultimately, any effort to reduce harms to a single measure, must, by necessity, limit itself to those harms that are amenable to that measure, be it a monetary value, standard of living, or something else entirely. The drug-policy community (e.g., MacDonald, 2005, and UNODC, 2005) has developed various indices of drug-related harms\(^{20}\) and, as mentioned already, several UK and Australian policy agencies have set up methodologies for assigning numerical scores to the harms associated with broad criminal issues and organized crime networks (for a review see Tusikov, 2009). The cost of crime literature offers monetization—itself a form of indexing—as a potential basis for comparison (e.g., Cohen, 2005). However, these efforts are reductionist by definition. Commensurability comes at a price, specifically the loss of information.

\(^{19}\) See Caulkins and Reuter, 1997: 1148 for a similar discussion of drug-related harms.

\(^{20}\) UNODC (2005) has developed an illicit drug index intended for cross country comparisons of a country’s overall drug problem, consisting of a single measure of potential health-related harm. MacDonald et al. (2005), focusing on a single country, the UK, take a broader view of harm than UNODC—they attempt to track changes in four types of drug-related harms (health impacts, domestic crimes, commercial crimes, and community harms. Ritter (2009: 478-479) summarizes these and other indices and describes them as “worthwhile.” Greenfield and Paoli (2010) take a more critical stance.
4. The Harm Framework

Our harm framework consists of three components: a taxonomy of the possible harms associated with criminal activities; two scales to assess the severity and incidence or frequency of these harms, respectively, and a matrix combining the two scales that provides a preliminary basis for prioritizing harms; and what we refer to as the “harm assessment process,” which traces the three analytical steps necessary to implement the taxonomy and scales and, ultimately, to assess criminal harms. The taxonomy constitutes the key instrument to carry out the first step of the process, namely to identify the harms associated with each criminal activity. The two scales and the matrix provide the basis for the second step, namely to assess harm severity and incidence. The third step consists in establishing the causality of harms.

In constructing our framework, we draw heavily from the literature on criminal harm assessment, most notably, von Hirsch and Jareborg (1991). In addition, we borrow insights and approaches from the literatures of other communities, specifically the drug policy community (e.g., MacCoun and Reuter, 2001 and Newcombe, 1992) and, less predictably, the national security community (Greenfield and Camm, 2005; U.S. Department of the Army, 1998 and 2001; U.S. Department of the Army et al. 2001). The national security community, faced with concerns about the “bad consequences” or harms resulting from “hazards”—and many similar conceptual and technical challenges, including those of quantification and commensurability—has developed and long-used a risk management tool that bears direct relevance to our effort.21

We have developed the harm framework under the auspices of a project that specifically addresses organized crime, but our approach does not focus exclusively on organized crime. Although we have not yet verified it empirically, we believe that the framework will be applicable to many other forms of crime.

4.1. Taxonomy of Possible Harms Associated with Criminal Activities

Our taxonomy identifies four different bearers of harms: individuals, private-sector entities, government entities, and the environment, both physical and social (see Appendix 1). Whereas some classification systems include harms to “the community,” as

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21 We summarize this approach in a recent paper (Greenfield and Paoli, 2010), discussing its potential to aid in the assessment of the harms of drug production and trafficking.
an independent bearer (e.g., Newcombe, 1992), we have tried to allocate most such harms to their ultimate bearers. Similarly, we attribute harms to “the economy” to their ultimate bearers; specifically, the individuals, businesses, NGOs, and government agencies that compose the economy. Given this choice, we differ from Kopp and Besson (2009) and Dorn and van de Bunt (2010) and omit systemic harms. In Kopp and Besson’s original methodology (2009: 312), systemic harms encompass all harms that do not directly affect individuals. As noted, we prefer instead to attribute harms, including systemic harms, to their specific, ultimate bearers. In implementing the assessment process though, attention must be paid to attribute the harms that Kopp and Besson and others might otherwise call “systemic”—e.g., decreases in real estate prices in a specific community as a consequences of drug dealing or market distortions resulting from money laundering—to the individuals, private sector and governmental entities, and environment, which constitute communities and the economy.

Table 2 identifies the bearers and types of harms. Appendix 1 provides detailed descriptions of each type of harm for each bearer.

Table 2. Bearers and types of harms

<table>
<thead>
<tr>
<th>Bearer of harm</th>
<th>Individuals</th>
<th>Private-sector entities</th>
<th>Government entities</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional integrity</td>
<td>X*</td>
<td>X**</td>
<td>X**</td>
<td>X***</td>
</tr>
<tr>
<td>Material interest</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>n/a</td>
</tr>
<tr>
<td>Dignity and/or</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>n/a</td>
</tr>
<tr>
<td>Reputation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Privacy</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Legend:
X = applicable
n/a = not applicable
* Functional integrity = Physical and psychological integrity
** Functional integrity = Operational integrity
*** Functional integrity = Physical, operational, and aesthetic integrity.

For individuals, we delineate harms much as Von Hirsch and Jareborg (1991) delineate them, but we expand the category of “physical integrity,” which we re-name “functional integrity,” to include both physical and psychological losses.22 Such physical

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22 In making this change, we follow the prevailing opinion of the drug-related harm literature. For example, MacDonald et al. (2005), MacCoun et al. (1996), and MacCoun and Reuter (2001) choose to include
and psychological losses range from death, at one extreme, to a minor injury, causing only momentary pain or discomfort. An action or event might harm an individual’s material interests. Such interests run the gamut of the financial and other means necessary for mere subsistence and the various amenities that elevate the quality of one’s life above and beyond mere subsistence. Harms to dignity and reputation arise from actions or events affecting the individual’s view of him or herself or others’ view of the individual. They might involve others’ mistreatment or exploitation, including humiliating and degrading treatment, as could occur in cases of human trafficking, and might stem from physical assault, verbal harassment, or mere association. Lastly, a violation of personal privacy, such as an unauthorized intrusion or the control of passports and other personal documents, as might occur in a burglary, kidnapping, or case of human trafficking, could also affect one’s ability to pursue one’s interests.

For private-sector entities, government entities, and the environment, our taxonomy offers analogies, if appropriate and available. For example, under the broader category of “functional integrity,” a business or government body might suffer a loss of operational integrity, rather than physical and psychological integrity; moreover, it might suffer a loss of reputation, but not dignity. A business or government body might also suffer a harm to “privacy.” Unauthorized access to and possible misuse of the entity’s premises or sensitive or proprietary information might render it less able to pursue its interests.23 Such unauthorized access might result from various offenses, including burglary and VAT fraud. In the case of VAT fraud, business documents, official documents, and other data are especially vulnerable, e.g., through falsification. Concerning harms to government entities, we stress that our taxonomy is applicable to all levels of government; that is, to any central, regional, or local public body.

For the environment, we limit the analysis to functional integrity, which we define as including physical, operational, and aesthetic integrity, and we consider any degradation of the national, regional, or local environment, be it physical or social. The remaining categories of harm, i.e., harms to material interests, dignity and reputation, and

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23 In the case of a public body, “its” interest might be re-framed as “the public” interest.
privacy, are either inapplicable or duplicative. Concerns about the physical environment include air, water, and soil pollution; noise and light pollution; inaccessibility of open spaces; and obstruction or destruction of landscapes. Concerns about social the environment include public nuisance, social fragmentation, and community disassociation. Drug dealing might, for example, create a persistent public nuisance, resulting in the de facto appropriation of public spaces.

In developing the taxonomy we have taken into account the conceptual challenges of assessing the harms of crime. Aware of the challenges of morality, cultural variability, subjectivity, and infinitude of harms, we have attempted to develop a broadly inclusive taxonomy, but we make no claim that it is exhaustive. We speak of “possible” harms, leaving it to policy-makers and other normative decision-makers to decide whether or not certain consequences of criminal activities should be considered harmful or not. Given the daunting problems of causality, our taxonomy lists possible harms “associated with” a criminal activity. The strength of the causal link between an activity or event and its harmful consequences may vary significantly and requires thorough analysis: some harms might be a direct consequence of that activity or event, but others might be remote, accumulative, or otherwise distant. We address causality at a later stage.

Reflecting our initial interest in organized crime—oftentimes, a complex endeavor—our taxonomy can accommodate the harms associated with complex criminal activities. It can be used, for example, to identify the harms associated with a primary criminal activity, such as cocaine trafficking, human trafficking, tobacco smuggling and counterfeiting, or VAT fraud, as well as the harms associated with the “enabling” or “accompanying” activities that might facilitate or occur along with the primary activity (for simplicity hereafter referred to as “accompanying activities”). In our ongoing assessment of cocaine trafficking in Belgium, we have identified corruption and the use or threat of violence as two relevant “accompanying” activities. Similarly, the

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24 Arguably, it might be possible to attribute at least some of these harms to individuals, private-sector entities, or government entities; however, in many settings, including those in which environmental property rights—and attendant responsibilities for management and oversight—are not clearly delineated, such an attribution would be complex, if not impossible.

25 The decision to include accompanying activities implies that the perpetrators of criminal activities might, themselves, constitute the victims of some enabling activities. As recognized by victimologists, there are striking similarities between the victim and offender populations and, in the case of violent crime, there is a frequent overlap. According to Antilla (1974; quoted in Fattah, 1992: 32-33), “the same individuals may
taxonomy can also be used to assess the harms associated with activities that are at least partially “enabled” by each criminal activity. In the case of Belgian cocaine trafficking, we have identified drug dealing and use as two such activities. The harms of the “enabled” activities constitute remote harms, because they are not caused exclusively by the primary criminal activity, but, instead, are mediated by the choices of victims and others along the supply chain. We leave it to policy-makers to decide whether and how “accompanying,” and “enabled” harms should be dealt with in policy-making.

We have also decided, at least preliminarily, to focus on gross harms; thus, we are excluding the benefits of criminal activities from our taxonomy and our test of the framework on four criminal activities in Belgium. However, were the analysis extended to other activities (e.g., human smuggling) or places (e.g., Afghanistan or Tajikistan, in the cases of opium production and heroin trafficking), a gross assessment could seriously bias the findings of the analysis (see Greenfield and Paoli, 2010).

Our taxonomy also excludes law enforcement costs. This decision goes against the frequent practice in the costs-of-crime literature (e.g., Cohen 2005), which adds the costs of preventing and responding to crime to the costs imposed and incurred by the offenders. However, if prevention and reaction costs were added, then the criminal activities that are already most heavily prioritized by law enforcement agencies—as reflected in their funding decisions—would likely appear to be more harmful than other criminal activities that have not been prioritized as heavily, thereby creating a vicious cycle. The policy implications of the inclusion of law enforcement costs can be paradoxical, as Levi and Burrows point out (2008: 294): “if one includes the costs of responses to crime as part of the ‘costs of crime’, the less that is done about them, the lower are the ‘costs of crime’.” Funding is not itself a measure of harm; rather, it reflects a society’s concern about the harm (see Dorn and van de Bunt, 2010: 9).

Along similar lines, we do not consider the costs incurred by private entities or private citizens to protect themselves from criminal activities. First, as a practical matter, individuals, and in most cases businesses and NGOs, do not assess the threat of each
criminal activity separately, thus making it impossible to identify, let alone estimate, the costs of attempting to prevent each particular activity.\textsuperscript{26} Second, prevention costs are not solely a function of crime itself, but are also a function of the risks of crime, as perceived by individuals and entities, which are, in turn, only partially dependent on crime. A business, for example, may incur security expenses for three reasons: an internal desire to hedge risks, the demand from employees and customers for particular protections, and government regulation mandating certain security measures (Jackson, Dixon and Greenfield, 2007: 34-35). Third, prevention costs are often bundled together with general compliance and technological systems and it would be very difficult to disentangle them empirically from the costs of these other activities. Fourth and more theoretically, one might also question if the costs of preventing crime should be called “costs of crime,” itself (Levi and Burrows, 2008: 310 and 294).

4.2. Scales of Severity and Incidence
For each of the harms in our taxonomy, we aim to establish both its severity and incidence. We do so on the basis of two ordinal scales and a matrix.

For severity, we draw from von Hirsch and Jareborg (1991) and Greenfield and Camm (2005). Borrowing structural elements and nomenclature from both approaches, we specify five categories of severity, ranging from “catastrophic” to “marginal.” For individual victims, the first four categories—catastrophic, grave, serious, and moderate—correspond to intrusions at each of the four living-standard levels, respectively; the fifth category—marginal—corresponds to those cases in which a crime does not encroach substantially at any level (see table 3). We apply the same scale to harms to other bearers, using a standard-of-living analogy for private-sector and government entities. Much as “living standard” does not focus on actual life quality or goal achievement, but on the means or capabilities for achieving a certain quality of life (von Hirsch and Jareborg, 1991: 7 and 10-11), in the case of private sector and government entities, we replace the individual’s living standard with an entity’s ability to fulfill its “mission,” defined as the

\textsuperscript{26} An exception to this general pattern may be represented by extortion practices in Southern Italy, which are routinely imposed by local, mafia-type organized crime groups. As legitimate businesses are usually the prey of such practices, they do focus on extortion as a separate criminal activity. However, rather than spending money on prevention, the majority of the affected Southern Italian businesses give in to the requests for protection taxes and, hence, they are clearly victims of extortion but their prevention costs are rather low (see La Spina, 2008 for a recent analysis of this phenomenon).
An entity’s *raison d’être*. An entity suffers harm if is less able to fulfill its mission. In many countries (e.g., the United States), federal, state, and local agencies publish mission statements. Mission statements are also common, possibly the norm, among medium and large businesses and NGOs in developed countries, if not elsewhere. Admittedly, some such mission statements amount to little more than image crafting; nevertheless, the underlying concept of an entity’s *raison d’être* still holds.

**Table 3. Benchmarks for severity ratings**

<table>
<thead>
<tr>
<th>Severity Rating</th>
<th>Level of Individual’s Living-Standard at which Damage Occurs</th>
<th>Level of Entity’s Mission Capability at which Damage Occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catastrophic</td>
<td>1°: Subsistence, consisting of survival, but with maintenance of no more than elementary human capacities to function</td>
<td>1°: Viability, consisting of survival, but with maintenance of no more than elementary institutional capacities to function</td>
</tr>
<tr>
<td>Grave</td>
<td>2°: Minimal standard of living</td>
<td>2°: Minimal mission capabilities</td>
</tr>
<tr>
<td>Serious</td>
<td>3°: Adequate standard of living</td>
<td>3°: Adequate mission capabilities</td>
</tr>
<tr>
<td>Moderate</td>
<td>4°: Enhanced standard of living</td>
<td>4°: Enhanced mission capabilities</td>
</tr>
<tr>
<td>Marginal</td>
<td>Marginal or no effect at any level</td>
<td>Marginal or no effect at any level</td>
</tr>
</tbody>
</table>

In assessing harms to individual victims, of which there might be many, we recognize a need for standardization. We aim to estimate the *standard* impact a certain criminal activity has on the living standard of individual victims, assuming that “injury occurs to someone who is neither especially vulnerable nor resilient” (von Hirsch and Jareborg, 1991: 4) in the context of the society under consideration. In contrast, we try to establish the impact of criminal activities on the ability of private-sector and government entities to achieve their missions on a case-by-case basis—given the relatively small number and heterogeneity of such entities, it is difficult to typify them, except perhaps on the basis of their earnings, budgets, or employment (see the discussion below)—and on the environment as a whole within the country or area under consideration.

The same criminal activity usually affects more than one interest dimension; that is, it yields different types of harms of possibly different severity. The only clear exception is that of the singularly “catastrophic” harm that results from homicide, in which case, the victim is no longer able to experience a material, reputational or other loss, though his or her heirs might. Following von Hirsch and Jareborg (1991: 24-25), we offer the potentially clarifying example of an assault that produces minor bruises and affects two interest dimensions: physical and psychological integrity and dignity and
reputation. Like von Hirsch and Jareborg, we rate the physical and psychological harm associated with such a crime as only “marginal.” The bruises do reduce the victim’s living standard in the short term but, taking the mid-range perspective that the authors propose, the impact on the victim’s overall well-being is not long-lived enough to be regarded as “moderate.” Being beaten up, however, also affects the victim’s dignity and reputation. In this regard, the impact of an assault is more lasting and can be rated as at least “moderate,” as it affects a person’s enhanced well being.

Corruption, too, may affect a private-sector or government entity’s ability to fulfill its mission in more than one way: corruption may impinge on the entity’s operational integrity, its privacy (particularly, if the entity’s premises are misused, false documents are produced, or sensitive information becomes publicly available), and its reputation. Depending on the rank and position of the employees involved and the type and extent of their illegal activities, the harm suffered by the entity could range from marginal to catastrophic. In assessing the harms to these non-individual bearers, it is also necessary to carefully specify and distinguish the unit of analysis. A branch or division of a government agency—or the entire agency—might be heavily affected by corruption, whereas the overall government remains fundamentally intact. The same also applies to the environment. A neighborhood may be heavily affected by a particular crime, whereas the nation, taken as a whole, may suffer little damage. Drug dealing, for example, could seriously affect the social environment of a specific neighborhood but the problem could be marginal for the nation or even the city.

Consistent with Greenfield and Camm (2005), who address the frequency or probability of a harm’s occurrence, we evaluate the incidence of harms. Here too, we use a scale with five broad categories, ranging from “always” to “rarely.” In our ongoing assessment of cocaine trafficking in Belgium, for example, we have found that the incidence of harms to individuals’ physical and psychological integrity varies depending on the type of activity considered: the threat or use of violence yields “marginal” harms “occasionally;” it yields “moderate” to “grave” harms and only “rarely.” Body-packing also yields “occasional” “marginal” harms, but its “rare” harms also include “catastrophic” events, specifically the loss of life. In contrast, theft may always cause harms to an individual or entity’s material interest. If a type of harm is not relevant to a
specific activity either in general or in the country or area under examination, we label it “non applicable”. In considering cocaine trafficking and its accompanying activities in Belgium, we have found no evidence of environmental harms and regard them as non applicable.

Drawing further insight from the national security literature (see Greenfield and Camm, 2005: 48), we have developed a prioritization matrix that combines information on severity and incidence (see table 4). Taken together, the severity and incidence ratings can provide a preliminary basis for prioritizing harms, whereas a severity rating, alone, cannot. For example, a grave harm might seem to merit more attention than a moderate harm, but if the grave harm rarely occurs and the moderate harm always occurs, the moderate harm may merit more attention. Moreover, the combination of our two scales can account for accumulative harms; that is, those harms that pose significant concern only if they are repeated. Building on the previous example of corruption, the occasional involvement of a low-level employee of a transportation company in cocaine trafficking may cause only marginal harm to the company’s mission. However, if numerous employees are involved, even if they are all low-level, the company’s operational integrity, reputation and perhaps also privacy may be endangered.

Table 4. Matrix of severity, incidence, and priorities

<table>
<thead>
<tr>
<th>Severity</th>
<th>Incidence</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Always</td>
</tr>
<tr>
<td>Catastrophic</td>
<td>H</td>
</tr>
<tr>
<td>Grave</td>
<td>H</td>
</tr>
<tr>
<td>Serious</td>
<td>H</td>
</tr>
<tr>
<td>Moderate</td>
<td>H/M</td>
</tr>
<tr>
<td>Marginal</td>
<td>M/H</td>
</tr>
</tbody>
</table>

H = Highest priority; M = Medium priority; L = Lowest priority
Source: Based on Greenfield and Camm, 2005, 48.

As our scales of severity and incidence of harms suggest, we do not try to quantify all harms. When available, we use quantitative data to inform our evaluation, but our framework does not fundamentally require quantification. Given the daunting conceptual and technical challenges associated with quantification, this flexibility “buys”

27 Severity and incidence provide a preliminary basis for prioritizing harms; however, one would still need to evaluative the relative costs of implementing measures to address the harm.
us the freedom of employing alternative means of analysis; we do not, so to speak, leave any credible information on the table. Much like von Hirsch and Jareborg, the national security doctrine, and other scholars in the drug policy community (e.g., Heather, 1995: 333), we accept expert judgment as valid.

Another advantage of our approach is that it might allow the comparison of a full range of harms within at least some classes of bearers, specifically within the class of individuals and the environment and, with some restrictions, within the classes of private-sector entities and government entities; however, harms remain largely incommensurable across classes of bearers. Different types of harms to individuals can be held to a common standard, i.e., the “standard of living,” as can different types of harms to a private-sector entity or government entity vis-à-vis its “mission,” enabling prioritizations within those categories, but damages to an individual’s standard of living cannot be compared to the damages to an entities mission capability, unless amenable to a common measure.28

But, even within classes of bearers analytical limitations arise. Consider the implications of heterogeneity among both private-sector and government entities. Because it is so difficult to typify such entities—and their harms—we examine them on a case-by-case basis, but how then do we compare the full range of harms across entities within each class?29 In some instances, an additional layer of scaling might be possible. For example, to compare the operational damages to a medium-sized business, employing hundreds of workers, to the damage to a small business, employing only a handful of workers, one might consider scaling the damages on the basis of each business’ total earnings or employment, in effect, creating something akin to a “standard” harm.30 In other instances, a remedy might be less apparent. Lastly, although we can hold harms within each class of bearers to a common, comparable standard, we cannot readily

28 In this regard, we are no worse off than those bound by the conceptual and technical limitations of monetization and other forms of quantification and can still make the same partial comparisons of harms that they can make. For example, we might be able to compare the material losses of individuals to those of a business or group of businesses, by returning to the underlying data that gave rise to our estimate of severity; but we might be less able to make comparisons for other types of harms. We are not captive to the limitations of a strictly quantitative approach, but we are not prohibited from making the best possible use of all available information, including quantitative information.

29 One might view each entity as its own class or sub-class.

30 To the extent that the damages to the businesses can be reduced to a monetary figure, those damages can also be made comparable, but, as discussed previously, not all damages are amenable to monetization.
aggregate them, e.g., to determine which criminal activity is most harmful to a particular bearer. We can tally the numbers of highest, medium, and lowest priority harms associated with each criminal activity, and make general inferences from the distribution, but we cannot state unequivocally whether an array of ten low-priority functional harms, five medium-priority material harms, and one high-priority reputational harm is “better” or “worse” than an array of twelve, four, and two such harms.

Nevertheless, our approach offers the benefit of making use of all available information, be it quantitative or qualitative, and, lacking need for large data sets or elaborate statistical methods, the potential advantage of speed. Our approach demands rigorous thinking, but, if an extensive data collection is not possible, one can still exploit the facts on-the-ground to conduct a rapid, yet systematic assessment.

4.4. Harm Assessment Process

The harm assessment process consists of a series of steps that involves data accumulation, sorting, and analysis. In the simplest possible terms, we aim to identify the harms associated with each criminal activity, evaluate their severity and incidence, and establish their causality, but to do so we first need substantial knowledge of each activity. Thus, to better inform the assessment process, we begin by constructing a “business model,” defined loosely as the modus operandi, for each activity. In mafia-like cases of organized criminal activities, one might imagine an actual business model; whereas, in other circumstances, the notion of a true “business model” would be too formal. Following the approach developed by Sieber and Bögel (1993) and Huisman, Huikeshoven and van de Bunt (2003) in studies of organized crime in Germany and the Netherlands respectively, the business model of a criminal activity consists of the depiction of the typical logistics of that activity. In particular, we use the business model to characterize key operational phases and, for complex crimes, “accompanying” and “enabled” activities. The business model also fuels the rest of the harm assessment process, by providing essential “building blocks” of information. Having constructed the business model, this process requires three additional steps (figure 1):

1. Identify possible harms associated with criminal activities and their bearers

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31 Note that this constitutes “Step 1” of the 2-step process presented in Greenfield and Paoli (2010).
a. Sort harms by primary, accompanying, and enabled activities
b. Classify harms according to type and bearer, using the taxonomy;

2. Evaluate the severity and incidence of harms
   a. Rank the severity of each harm; and
   b. Rank the combined incidence of
      i. each criminal activity and
      ii. each harm in relation to each criminal activity

3. Establish the causality of harms.

**Figure 1. Harm Assessment Process and Possible Applications**

The taxonomy and the two scales serve as the main tools in the first two steps of the assessment process. The evaluation of incidence, however, is not limited to the harms in relation to the criminal activity but also includes an assessment of the incidence of the criminal activity itself. A criminal activity may always produce serious harm but if the activity is very rare, it may not merit prioritization.
We stress that the third step, “establish causality,” is at least as crucial as the previous two. As noted above, the strength of the causal link between a criminal activity and a harm may vary significantly: whereas some harms constitute a direct consequence of an action, others result from the intervening decisions and actions of several people linking the criminal actor to the final victim. If these remote harms are included in the final assessment, they cannot be put in the same basket, without qualification, with the harms that are the direct consequence of the same criminal activity. The relevance of this step has already been established in other bodies of literature. Much as MacCoun and Reuter (2001) look to the primary sources of drug-related harms, Greenfield and Camm (2005: 47-48) conclude that establishing the “root” cause of a bad consequence affecting a military mission or other national security operation is essential; otherwise, a policy-maker might take inappropriate action to address the consequence. In the case of criminal activities, establishing causality serves an additional and related purpose; that is, it enables one to assess the impact of the illegal status of the activity, itself. As noted by Maltz (1990: 41-47-8), an activity might cause harm, whether it is illegal or legal (e.g. Anielski and Braaten, 2008: 81-99 in the case of gambling), while some other activity might cause harm in part or whole because it is illegal (e.g., violence and corruption in the case of cocaine trafficking). Moreover, one cannot weigh the pros and cons of different policy options without ascertaining causality.

We walk through this process by giving a glimpse of our ongoing assessment of the possible harms associated with cocaine trafficking in Belgium. To start to assessment, we have constructed a business model—specific to Belgium—in which we have identified the typical phases of this criminal activity: import, export or wholesale distribution, and money laundering.\textsuperscript{32} For the import phase, we have also distinguished each of the major sea, air, and land routes. Lastly, we have singled out the threat or use of violence and corruption as the two main “accompanying” activities and drug dealing and use as the two main “enabled” activities.

\textsuperscript{32} To construct the business model, we have carried out an extensive data collection. We have analyzed a consistent sample of criminal files (52), all the relevant entries (81) in the Belgian Federal Police database on organized crime for the years 2006-08, interviewed 12 law enforcement officers and 12 convicted offenders, examined academic grey literature and open sources (for a detailed account of the assessment and its findings, see Paoli, Zoutendijk and Greenfield, 2010).
In constructing the business model, we have found that the Port of Antwerp and Brussels International Airport dominate the trade as points of entry and we have determined that most of the cocaine that enters Belgium likely enters for purposes of transshipment to other countries in Europe. On the basis of sewage water analyses (Bervoets et al., 2009; Van Nuijs et al., 2009), which suggests an annual Belgian consumption figure of about 1.75 tons, and a variety of other sources, we conclude that cocaine trafficking is a prominent criminal activity and that substantially more cocaine enters Belgium than is consumed there. Large-scale seizures, ranging from a low of 2.5 tons to a high of 9.2 tons from 2005 to 2008 (Belgian Federal Police, 2010), typically exceed the estimated consumption. Moreover, the U.S. Department of State (2010: 143) reports—but the basis remains unclear—that about 25% of the cocaine moving from South America through Europe eventually transits Belgium. If correct, that would amount to at least 30 tons annually, estimated on the basis of consumption in Europe, and without accounting for seizures (UNODC, 2010: 71).

We are now implementing the harm assessment process on the basis of this business model. The first step has been to identify potential harms associated with the main phases of cocaine trafficking, its accompanying and enabled activities, and the bearers of harms. Consistent with our stated goals of breadth and inclusivity and attempting to leave as many normative decisions as possible to the policy-making community, we have chosen to include harms to offenders incurred in the conduct of a criminal act; for example, we have included the physical and psychological harms to body packers. We have attributed particular harms to the activities in each phase and classified them according to type and bearer on the basis of the taxonomy. In addition to the harm to government reputation that occurs when a law is repeatedly broken, we conclude, for example, that four main types of harms are associated with importation:

1. Harms to the physical and psychological integrity of individuals may arise either from cocaine trafficking via the air route, when cocaine balls are hidden in

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33 An alternative calculation, based on UNODC prevalence and consumption data (2010: 71 and 285) and U.S. Central Intelligence Agency population data (available on-line at https://www.cia.gov/library/publications/the-world-factbook/index.html, and downloaded on September 30, 2010), suggests an annual consumption figure of about 2.5 tons.

34 In an act of apparent self-contradiction, we do not, however, include the material losses that occur when one criminal steals another criminal’s illegally-obtained or inherently-illegal possessions in the midst of a criminal transaction, as might occur in the case of a “rip deal.”
the couriers’ body and explode, or from the use or threat of violence. In the latter case, traffickers, couriers, other potential facilitators, and, more rarely, government officials may be victimized.

2. Harms to the reputation and operational integrity of government entities may arise if some officers (e.g., customs) are corrupted, although only one minor case of cocaine-related corruption has been investigated in Belgium.

3. Harms to the reputation and operational integrity of transport and import-sector businesses may arise, if employees are corrupted or traffickers exercise undue influence, particularly when cocaine is imported via sea or air.

4. Harms to the reputation of these same transport and import-sector businesses may also arise, if the businesses—or the assets of the businesses—are repeatedly misused by traffickers, even without internal collaboration.

The second step of the process has been to evaluate the incidence and severity of harms associated with cocaine trafficking in Belgium. We began this step by estimating the incidence of the primary activity, i.e., cocaine trafficking. Recalling the U.S. Department of State estimate of Belgian throughput (25% of the cocaine moving from South America through Europe, potentially amounting to at least 30 tons annually) and given the variability of shipment quantities (ranging from grams to tons) and the frequency of seizures, we describe trafficking as a “persistent” activity. It might be reasonable to conclude that small-scale operations occur weekly, if not daily, and that large-scale operations occur monthly, if not weekly.

Next, we are evaluating the incidence and severity of harms in relation to the activity. For this task, the final goal is to produce a comprehensive assessment of the harms associated with cocaine trafficking. We have begun by considering the harms associated with each primary, accompanying, and enabled activity, to make detailed assessments of each type of harm.

As an example, we discuss here the harm to the Belgian government from a particular accompanying activity, i.e., corruption. In the 81 cases of cocaine trafficking listed in the Belgian police’s organized crime database for the period 2006-2008, only one Belgian police officer and a police trainee are suspected of facilitating cocaine smuggling. The case is still pending. According to the experts interviewed in both
Antwerp and Brussels, no other case of cocaine-related corruption has ever come to the fore—this impression being confirmed by foreign sources (U.S. Department of State, 2010: 143). We have no evidence that the officer or trainee’s acts of facilitation yielded any substantial damage to the operational integrity, reputation or “privacy” of the Belgian police force. Thus, we regard the harms created by cocaine-related corruption to the operational integrity, reputation, or “privacy” of the Belgian government or any of its subunits as rare, in terms of incidence and marginal, in terms of severity. Taken together, these appear to be mostly low-priority harms for the Belgian government.

It is important to stress that, while our approach facilitates the systematic assessment of wide-ranging harms, it does not fully enable tallies of disparate harms within a particular class of bearers or direct comparisons of analogous harms across different categories of bearers. With regard to the former, a small set of low-priority harms for one bearer in one arena, such as the Belgian government vis-à-vis cocaine trafficking, might be better or worse than an even smaller set of low-priority harms coupled with a medium-priority harm for the same bearer in another arena. One might argue that a single “medium” trumps any number of “lows,” but who is to say what the combined effects might be in either case? With regard to the latter, medium-high-priority functional harms to individuals, as occur with respect to body-packing, might merit more or less concern than medium-high-priority functional harms to private-sector or government entities. Notwithstanding the many caveats, we can still look at the broad sweep of our ratings and draw some preliminary conclusions from their distribution: for example, we find that the harms of cocaine trafficking most notably involve, but are not limited to, the individuals who are, themselves, trafficking drugs.

We have not yet completed the third step of the assessment process, namely the analysis of causality. However, none of the harms identified so far seems to be intrinsically related to cocaine trafficking. Rather, they appear to arise from the criminalized status of this activity and the resulting lack of government enforcement of contracts (e.g., Paoli, Greenfield and Reuter, 2009: chap. 10).

4.5. Potential Policy Applications
The harm assessment process can be extended with at least three alternative applications (see figure 1). In the case of the Belgian project that motivated our development of this framework, the main goal is to provide policy-makers and law enforcement agencies with an evidence-based analysis to help them select long-term strategic priorities in the field of organized crime control. This goal implies that the assessment process must be repeated for different criminal activities and then the findings must be “compared”—to the extent possible—across activities. Given the incommensurability of harms across different classes of bearers and the difficulty of summing harms within classes, our framework cannot give an overall ranking of criminal activities by harmfulness. However, we believe that it might contribute to such a task, because it can allow for some comparisons and rankings within each class of bearers. Once our assessment of the harms of four different criminal activities in Belgium is finished, we can compare the distribution of different types of harms across activities and, depending on the shapes of those distributions, make general inferences about the activities’ relative harmfulness. Due to incommensurability of harms, though, no overall comparison will be possible.

Second, if data on the sources of harms are collected with sufficient detail, our framework can also be used to help law enforcement agencies identify “operational objectives”; that is, deciding which perpetrators merit special attention. The assessment process may, for example, reveal that certain types of perpetrators (distinguished by gender, ethnicity, area of activity, criminal organization affiliations, modus operandi or other characteristics) disproportionally engage in particularly harmful activities.

Third, our framework may be used to assess and compare the impact, including the unintended consequences, of different policy measures. To achieve this goal, the analysis must be repeated under different policy scenarios, for example, to compare the harms associated with cocaine trafficking under the current regime of prohibition and typically strict enforcement with those under alternative legal and regulatory regimes (for more on this approach to policy analysis, see Greenfield and Paoli, 2010). If the analysis were repeated for different countries, the assessment could also identify the “winners” and “losers” under the current or any proposed policy regime.
Concluding Remarks

As the proposed policy applications suggest, our framework represents a potential advancement for evidence-based policy-making. It offers a basis for systematically harvesting available information, be it quantitative or qualitative, including expert opinion. Moreover, our framework, unlike its taxonomic predecessors (e.g., MacCoun and Reuter, 2001; Newcombe; 1992, von Hirsch and Jareborg, 1991), has the advantage of being applicable to many different forms of crime, including those complex crimes wherein harms do not derive from a single actor or activity.

No doubt, the conceptual and technical difficulties of the exercise remain daunting. However, by acknowledging these difficulties explicitly, we have identified means to work through them in the framework and we spell out the caveats to be attached to the findings resulting from the analysis. Realizing the problems of quantification, for example, we propose a qualitative alternative—a choice that also raises the possibilities of rapid assessments and cross-country comparisons. Aware of the insurmountable challenge of incommensurability, we emphasize that it is not possible to develop an encompassing estimate of the total harms of criminal activities. Along similar lines, we make clear which steps can be carried out on the basis of scientific rules and methods alone and which decisions are inherently normative.

Despite the difficulties, the harm framework provides the tools and delineates the steps necessary to reliably “estimate” some harms of criminal activities and thus begin research in this crucial but still neglected area of study. If crimes, and specifically organized criminal activities, are to be prioritized on the basis of their seriousness and harms, as more and more agencies call for, it is time for criminologists and other social scientists to start discussing methods and carrying out empirical analyses to support the policies or, instead, to demonstrate their poor empirical bases.

Appendix 1. Taxonomy of Possible Harms Associated with Criminal Activities

<table>
<thead>
<tr>
<th>Possible harms associated with a criminal activity</th>
<th>Description</th>
</tr>
</thead>
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39
### Possible harms associated with a criminal activity

#### Description

<table>
<thead>
<tr>
<th>HARMS TO INDIVIDUALS, specifically to their:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical and psychological integrity</strong></td>
<td>Damages to physical and psychological health and safety and the avoidance of physical or psychological pain, ranging from intended or accidental deaths to a minor injury, causing only momentary pain or discomfort.</td>
</tr>
<tr>
<td><strong>Material interests</strong></td>
<td>Damages to one’s material support, including financial means and amenities. These interests range from the most basic material support needed for subsistence to the material goods and amenities needed for an enhanced well-being.</td>
</tr>
<tr>
<td><strong>Dignity and reputation</strong></td>
<td>Damages to the individual’s view of self or others’ view of the individual. Injuries to dignity and reputation derive from others’ mistreatment or exploitation, including humiliating and degrading treatment, and stem from physical assault, verbal harassment, or mere association. They may be especially relevant in cases of human trafficking.</td>
</tr>
<tr>
<td><strong>Privacy</strong></td>
<td>The loss of one’s ability to pursue one’s interest, involving violations of personal privacy, such as unauthorized intrusions or control of personal documents, as might occur in a burglary or kidnapping. Control of a victim’s passport in cases of human trafficking is, for example, yield a harm to privacy.</td>
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<table>
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<tr>
<th>HARMS TO PRIVATE-SECTOR ENTITIES (including businesses and NGOs), specifically to their:</th>
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<tbody>
<tr>
<td><strong>Operational integrity</strong></td>
<td>Damages to the operational integrity of a private-sector entity, ranging from the collapse or total control of an entity to the occasional impairment of its decision-making and operations, possibly through the corruption of an official, employee, or other representative.</td>
</tr>
<tr>
<td><strong>Material interests</strong></td>
<td>Damages to an entity’s physical, financial, or intellectual property. Such injuries may stem from burglary, property damage, intellectual property theft, and other offences.</td>
</tr>
<tr>
<td><strong>Reputation</strong></td>
<td>Damages to others’ view of the entity. Injuries to reputation may arise from the involvement of an entity or any of its officials, employees, or other representatives in a criminal activity; the victimization of an entity or its officials, employees, or representatives; or the entity’s inability to enforce its rules.</td>
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</table>
### Possible harms associated with a criminal activity

<table>
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<tr>
<th>Description</th>
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<tbody>
<tr>
<td><strong>“Privacy”</strong></td>
</tr>
<tr>
<td>The loss of an entity’s ability to pursue its interests stemming from unauthorized access to and possible misuse of an entity’s premises or sensitive or proprietary information. Unauthorized access may result from various offenses, including burglary and VAT fraud. In cases of VAT fraud, business documents and other data are especially vulnerable, e.g., through falsification.</td>
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### HARMS TO GOVERNMENT, specifically to its:

<table>
<thead>
<tr>
<th>Operational integrity</th>
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<tbody>
<tr>
<td>Damages to the operational integrity of a central, regional, or local public body, ranging from the collapse or total control of that body to the occasional impairment of its decision-making and operations, possibly through the corruption of a government official or elected representative.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damages to a central, regional, or local public body’s physical, financial, or intellectual property. Such injuries may stem from burglary, intellectual property theft and misuse, tobacco smuggling, VAT fraud, and other offences.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Reputation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damages to others’ view of the government. Injuries to reputation may arise from the involvement of a central, regional, or local public body or any of its officials or representatives in a criminal activity; the victimization of that body, its officials, or its representatives; or the government’s inability to enforce its rules.</td>
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<table>
<thead>
<tr>
<th>“Privacy”</th>
</tr>
</thead>
<tbody>
<tr>
<td>The loss of a central, regional, or local public body’s ability to pursue its interest, stemming from unauthorized access to and possible misuse of that body’s premises or sensitive information. Unauthorized access may result from various offenses, including burglary and VAT fraud. In cases of VAT fraud, official documents and other data are especially vulnerable.</td>
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### HARMS TO THE ENVIRONMENT, specifically to its:

<table>
<thead>
<tr>
<th>Physical, operational, and aesthetic integrity</th>
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<tbody>
<tr>
<td>Damages to the national, regional, or local environment, be it physical or social. Concerns about the physical environment include air, water, and soil pollution; noise and light pollution; inaccessibility of open spaces; and obstruction or destruction of landscapes. Concerns about the social environment include public nuisance, social fragmentation, and community disassociation. Drug dealing might, for example, create a persistent public nuisance, resulting in the de facto appropriation of public spaces.</td>
</tr>
</tbody>
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35 In this case, “its” interest might be re-framed as “the public” interest.
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Department of the Army, Marine Corps, Navy, and Air Force. 2001. “Risk Management: Multiservice Tactics, Techniques, and Procedures,” FM 3-100.12, MCRP 5-12.1c, NTTP 5-03.5, and AFTTP(I) 3-2.34, Air Land Sea Application Center, February.


Dorn and van de Bunt (2010).


U.S. Central Intelligence Agency…


