

Deviant Behavior



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An Assessment of Hitmen and Contracted Violence Providers **Operating Online**

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ABSTRACT

Past research has considered the ways in which vendors and consumers of illicit goods adapt to various formal and informal threats and manage risk in online environments. However, this topic is virtually unexplored in the context of contract-based violence. Using a sample of 24 advertisements posted on the Open and Dark web, this study utilizes a qualitative case study design to analyze the ways in which vendors attempt to signal legitimacy through the language and images used in their posts. Further, this work outlines the advertised payment structures and prices based on the skill level of contract hitmen, the weapons used, the method of violence, and the status of potential victims. The analysis reveals several ways in which vendors emphasize the privacy and anonymity of their services and highlight their ties to well-recognized organizations (e.g., the military, the mafia) in an attempt to mitigate risk and uncertainty for consumers. In addition, results reveal that online list prices for basic services are higher than previous estimates for similar services offered off-line, suggesting a premium associated with legitimacy and anonymity. These findings contribute to the literature surrounding the market for contract violence, as well as online illicit market processes generally.

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One of the oldest criminological paradigms is that of the classical school, which argues humans are rational actors who decide to engage in a behavior on the basis of its rewards relative to the risk of detection and negative consequences (Becker 1968). Individuals offend when the benefits of an action outweigh these consequences, though this calculus can be influenced by situational provocations as well as the individual's past experiences with punishment and punishment avoidance (Cherbonneau and Copes 2006). As a consequence, increasing the potential risk of detection and sanctions from formal and informal sources of social control should be sufficient to deter individuals from offending (Becker 1968; Clarke 1997; Gibbs 1975).

Research applying rational choice frameworks have found that offenders who engage in relatively public offenses, such as open-air drug sales (Cross 2000; Jacobs 2000; Topalli, Wright, and Fornango 2002), prostitution (Holt, Blevins, and Kuhns 2009), and carjacking (Jacobs and Cherbonneau 2018; Topalli, Jacques, and Wright 2015), continue to offend despite their increased risk of arrest and harm from formal and informal sources of social control. Offender behavior adapts in response to new information about the likelihood of detection, as well as subtle signals by law enforcement or cooffenders in the context of an offense (Gill et al. 2018; Johnson and Natarajan 1995). These studies also demonstrate that illicit markets require participants to place themselves at an increased risk of detection from police and community members, as well as predatory actions by other criminals (Holt et al. 2015; Jacobs 2000; Topalli, Jacques, and Wright 2015).

There is also evidence that actors have begun to utilize online environments to engage in illicit transactions as a means of minimizing their risk of detection from law enforcement (Aldridge and Askew 2017; Holt et al. 2015). There are now myriad websites and forums that enable individuals to engage in the sale of various goods and services traditionally sold in physical spaces, including sex work (Holt, Blevins, and Kuhns 2009), drugs (Aldridge and Askew 2017; Moeller, Munksgaard, and Demant 2017), and firearms (Copeland, Wallin, and Holt 2020). Virtual illicit markets present a unique risk reduction strategy due to increased anonymity and limited investigative powers of police (Aldridge and Askew 2017; Holt et al. 2015). At the same time, participants face informal risks from vendors, such as failure to deliver product or receiving low quality or unusable items (Holt et al. 2015; Moeller, Munksgaard, and Demant 2017; Morselli et al. 2017). As a consequence, participants utilize informal risk reduction tactics such as vetting vendors via community-based reviews and third-party escrow payment platforms to minimize the potential for loss (Aldridge and Askew 2017; Morselli et al. 2017).

Though researchers have extensively examined the processes of online markets for drugs (see Flamand and Décary-Hétu 2019), there is anecdotal evidence to suggest an under-examined form of physical crime has moved online: contract killing (French 2012). Media reports note individuals advertise their services for contract violence, though the legitimacy of advertisers' claims are suspect (e.g., Cox 2017; Miller 2018; Volpicelli 2018). Advertising and soliciting physical violence in online spaces is sensible from a restrictive deterrence perspective, as it may reduce the risk of detection from police agencies (Evans 2012; French 2012). However, it is also possible that online advertising may increase the likelihood that a potential customer could identify a vendor to law enforcement after their services have been utilized. In addition, potential customers face additional risk in the transaction; they may be swindled by vendors who take their funds without completing the contract and have limited recourse due to the illicit nature of the service (Aldridge and Askew 2017; Holt et al. 2015). Thus, it is unclear from a restrictive deterrence perspective whether the movement of solicitations of contract killings to online markets is expected or inevitable.

To date, there has been no systematic attempt to analyze the scope and nature of advertisements for contract-based violence advertised online (Volpicelli 2018). It is unclear how vendors communicate their potential legitimacy in order to attract potential clients. Additionally, it is unknown how they leverage similar trust-based systems used in other online illicit markets to ensure participants are satisfied with any outcomes. This study attempts to address these issues through a mixed-methods analysis of 24 websites advertising hitmen and contract violence providers on the traditional and Dark Web or encrypted Internet connections that shield the physical location and user details for each participant (Aldridge and Askew 2017; Copeland, Wallin, and Holt 2020). The language of vendors was considered along with the pricing and services offered. Any claims of legitimacy by the providers were also assessed to consider the extent to which they may attempt to draw in customers. The implications of this analysis for our understanding of online advertising and restrictive deterrence were examined in depth.

Prior research on contract violence

While there is limited research regarding online solicitations for contract killing and violence, direction can be taken from the existing research regarding such activities in physical space. Interactions between the vendors and consumers of contract killings off-line follow patterns of scripted behavior (Black 2000; Black and Cravens 2001), with consumers having three main ways to solicit vendors who can facilitate violence for a fee (Mouzos and Venditto 2003). The first method is indirect and involves the consumer announcing to a friend or acquaintance that they are looking to hire the services of a vendor. The friend then acts as an intermediary between the consumer and a vendor they know, providing negotiation and communication services between the two parties.

The other two methods require more direct engagement between client and vendor. Specifically, the consumer can directly approach a vendor they are already known in some way

(Mouzos and Venditto 2003). They provide details of the target and negotiates with the vendor to carry out the contract. Lastly, a consumer may approach someone who may not be a known contract killer but has a violent criminal history (Mouzos and Venditto 2003). The consumer then asks this individual whether they would be interested in constructing a contract to engage in violence on their behalf.

Once the contract is generated, typically through verbal rather than written communication, uncertainty and risk are inherent in the agreement and exchanges between vendor and consumer (Black 2000; Mouzos and Venditto 2003). The process of identifying, negotiating, and paying for the murder of another person allows vendor, customer, and any intermediaries to be identified and tied to the event. As a consequence, all parties face legal risks due to the overtly illegal nature of the agreement. In addition, there are various aspects of the contracted relationship that present risks to both parties. First, consumers may be uncertain about the experiences of a particular vendor, the quality of their services, and the likelihood that the service will be properly carried out (Mouzos and Venditto 2003). Vendors may be uncertain whether their identity will be compromised by the consumer should he or she be contacted by the police. They may also not receive compensation in the manner and amount expected from the customer.

To that end, the price paid for contract violence should reflect the risk and uncertainty inherent in completing a hit (Cameron 2014). Multiple studies have noted some consistency in the average price paid for killings and violence generally. Evidence suggests that the average cost for contract killings in the UK varied between 10,000 GBP or 12,000 USD (Mouzos and Venditto 2003) and 15,000 GBP or approximately 18,000 USD (MacIntyre et al. 2014). Similarly, data from Australia suggest the mean price paid for violence was an average of 16,000 AUS or 11,200 USD (Cameron 2014). Additionally, Cameron (2014) noted that the full sum was paid to the vendor before the completion of the contract in most cases in Australia. In some circumstances, consumers offered payments to contractors in increments, sometimes as a result of monthly life insurance payouts (Cameron 2014).

Given the uncertainty, risk, and danger associated with the nature of contract killing, and modern figures for the economic valuations of human life (Miller 2000), the prices paid to vendors have been generally low. The discrepancy between the level of uncertainty and the price paid for contract killing may be explained by the level of trust between vendor and consumer. Specifically, the presence of trust between vendor and client may mitigate uncertainty and supplement the real price for the task performed. In instances where the consumer provided up-front payment in full, the vendor may be willing to accept a lower payment due to a perceived level of trust between both parties. In addition, Cameron (2014) hypothesized that empathy built between the consumer and vendor may affect prices. Individuals receiving lower payments may reflect a "gift" rather than a "wage" given to a close associate who might be willing to do the task or as a token to a friend rather than a payment for performance (Cameron 2014).

The low prices associated with contract killings may also be explained by the vendor's lack of experience, which could create uncertainty for the consumer. Generally, vendors in contract violence relationships fall into one of the three categories based on their characteristics and experience: amateurs, semiprofessionals, and professionals (Revitch and Schlesinger 1981; Schlesinger 2001). A professional contract killer is typically a member of an organized crime network, or a free-agent hired by that organization, who carries out killing on its behalf. Semiprofessional and amateur contract killers only engage in the act on a one-time or limited basis and are less experienced. Schlesinger (2001) notes that most contract murders in the United States appear to be carried out by amateurs, commonly hired to eliminate a spouse or intimate partner. This pattern is also confirmed in MacIntyre et al. (2014) Australian sample, as almost all of the hits were carried out by vendors with no prior experience in contract killing. Thus, it may be that amateur contract killers will accept a lower price to compensate for their inexperience and the consumers' consequential distrust.

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Assessing online advertisements for illicit goods and services

While the current academic literature surrounding contract killings focuses almost exclusively on solicitations in the real world, there is some evidence of individuals utilizing the Internet as a means to identify contract violence services (Evans 2012; Volpicelli 2018). Over the last decade, research has demonstrated the breadth of illicit goods and services providers operating online, whether for sexual services (Holt, Blevins, and Kuhns 2009), drugs (Flamand and Décary-Hétu 2019), firearms (Copeland, Wallin, and Holt 2020), and various forms of personal information (Holt et al. 2015; Smirnova and Holt 2017). As a result, it is plausible that contract violence providers may move to online spaces as the Internet appears to give both consumers and vendors greater anonymity.

There are key differences in where advertisements for illicit goods and services may appear online. Some research examining online advertisements for sexual services have been generated in part from the so-called Open Web, which comprises information posted on the unencrypted World Wide Web (Flamand and Décary-Hétu 2019). The content on the Open Web is accessible via traditional web browsers and may have been indexed via search engines such as Google. Additionally, the content is hosted on web servers that provide information about the physical location of the materials and a degree of detail about the site operators (Smirnova and Holt 2017).

A smaller proportion of online content operates on the so-called Dark Web, which can only be accessed via specialized encryption software and browser utilities such as Tor (Copeland, Wallin, and Holt 2020; Flamand and Décary-Hétu 2019). These tools hide the IP address and location details of both users and the servers that host content, making it difficult to track individuals' behaviors. Additionally, Dark Web content is not indexed through traditional search engines, which complicates the process of identifying websites without some knowledge of their existence. As a result, Dark Web operations are thought to be more secure and resilient to law enforcement investigations over time (Aldridge and Askew 2017). These factors may account for the substantial growth of markets to facilitate the sale of drugs, guns, and other materials on the Dark Web (Flamand and Décary-Hétu 2019).

Regardless of where individuals advertise illegal goods and services, it is clear that the use of technology creates uncertainty between participants in a transaction (Aldridge and Askew 2017; Holt et al. 2015; Moeller, Munksgaard, and Demant 2017; Morselli et al. 2017). Since customers are unable to physically interact with the vendor or fully validate the legitimacy of their claims, trust is a crucial element of the scripted behavior between vendors and consumers. Examinations of the processes of online sales of various illicit physical goods and services demonstrate that customers take on the greatest potential risks in a transaction (Aldridge and Askew 2017; Holt et al. 2015; Morselli et al. 2017). While vendors must create ads and actively distribute products, buyers are required to provide upfront payments for items which they are unable to inspect physically (Holt et al. 2015). Buyers must also wait for the vendor to deliver goods, at which point they may be able to actually assess the quality of a product or service (Aldridge and Askew 2017; Morselli et al. 2017). Additionally, the illicit nature of the products sold makes it difficult for buyers to file complaints through formal dispute resolution systems, such as payment providers, in the event they are dissatisfied (Holt et al. 2015; Moeller, Munksgaard, and Demant 2017).

As a result, customers must utilize informal means to assess vendor legitimacy, including textual and image-based cues, such as the use of photos of products, the presence of customer support lines, and the presence of positive or negative feedback posted by customers (Aldridge and Askew 2017; Hutchings and Holt 2015; Martin 2014). Feedback is particularly important as it is one of the few means by which individuals can independently assess vendor practices based on other's experiences (Moeller, Munksgaard, and Demant 2017; Smirnova and Holt 2017). Individuals are highly encouraged to provide positive or negative reviews of their experience with a vendor so as to informally validate any claims they make and demonstrate the vendor's reliability (Flamand and Décary-Hétu 2019; Hutchings and Holt 2015).

Given the social and behavioral dynamics observed in various online illicit market operations, it is unclear how advertisements for contract violence are constructed to demonstrate vendor legitimacy. It is plausible that vendors utilize linguistic and visual cues that reflect aspects of contract violence services in physical spaces. Specifically, vendors may utilize phrasing that reflects their prior experience with violence as a function of their involvement with criminal lifestyles or military experience (Revitch and Schlesinger 1981; Schlesinger 2001). Such language would help demonstrate the vendors' professional experiences as opposed to more amateur service providers. Any evidence vendors can provide as to prior completed contracts may also be of benefit to demonstrate their legitimacy. At the same time, such information may be withheld so as to minimize their risk of detection. Thus, it is unclear how much information vendors would provide to help demonstrate their legitimacy.

It is also plausible that vendors may discuss the need for privacy and secrecy in communications due to the overtly illegal nature of their services. Since online advertising should reduce the influence on the perceived risks of acquiring contract violence service providers, it may benefit the vendors to communicate these potential benefits (Volpicelli 2018). In addition, it is expected that vendors would provide some breakdown of their pricing models, similar to other online advertisements. It may also be to the vendor's benefit to provide specific details as to the various forms of violence they may be willing to perform so as to demonstrate their scope of services (Revitch and Schlesinger 1981). Additionally, the price for services may also help individuals estimate the legitimacy of vendor claims based on their perceived cost. It is unlikely, however, that vendors will provide customer feedback so as to demonstrate their perceived capacity for trust and privacy of their clients.

Data and methods

To address these questions, this study analyzed 24 advertisements posted on both the Open (n = 4) and Dark web (n = 20); see Table 1 for detail). Data collection took place from August 2018 to September 2019 to allow for a large sample of advertisements to be collected. Sites were identified through the use of search protocols through web browsers using keywords such as "hitman assassin service pay btc." To augment the limited results of Dark Web search engines, this study also included

Table	1	Sample	noni	Ilation	(n =	24)
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Forum	Open/Dark Web	Multi-page
1	Dark	Yes
2	Dark	Yes
3	Dark	No
4	Dark	No
5	Dark	Yes
6	Dark	No
7	Dark	Yes
8	Dark	Yes
9	Dark	Yes
10	Dark	No
11	Dark	Yes
12	Dark	No
13	Dark	Yes
14	Dark	No
15	Dark	No
16	Dark	No
17	Dark	No
18	Dark	Yes
19	Dark	Yes
20	Dark	Yes
21	Open	Yes
22	Open	Yes
23	Open	Yes
24	Open	Yes



results from the Hidden Wiki to identify service providers that had been observed in the past (Copeland, Wallin, and Holt 2020; Flamand and Décary-Hétu 2019).

This study focused only on vendors who operated stand-alone web sites that overtly advertise hitman, assassination, or contracted-violence services. Individuals advertising via Craigslist, forums, and other sites using covert language were not included in this sample. Not only would it be difficult to identify such providers in these diffuse platforms, but it would also not provide sufficient information as to the practices of directed hitmen services that appear to have developed on the Dark Web (Volpicelli 2018) As a result, this sample may not be generalizable to individuals advertising through more surreptitious means. Instead, it provides a purposive, yet convenient sample of seemingly legitimate, but clearly advertised service providers offering to engage in contract killing.

To create the data set, all pages from each site were saved as html files for analysis. Of the 24 sites in this sample, 15 of the advertisers' websites included multiple html pages. The text and images present in each website were then read and coded by hand for qualitative and quantitative analyses (see also Aldridge and Askew 2017; Copeland, Wallin, and Holt 2020). Quotes are provided using the direct language from each post with all spelling and grammar intact, though the usernames and URLs are excluded to provide a modicum of anonymity for the users (Holt 2015). A qualitative case study design was employed to consider the practices of vendors based on the language in their advertisements, as well as images posted for products (see also Aldridge and Askew 2017; Copeland, Wallin, and Holt 2020). The methods for purchase, payment, and distribution of product were explored along with any customer support measures and trust mechanisms used by vendors. Additionally, the range of products sold and differences in price points over time are examined in detail. Deviant cases are highlighted to demonstrate differences across vendors, and direct quotes were taken from the ads to illustrate points where appropriate.

Findings

Many of the vendors in this sample made it clear why and how individuals may want to use their services, as with this post from Vendor 24:

Do you have problems with fierce competition, neighbors, your mother-in-law, the dictator of your home country? Do tax authorities and debtors want you? Are there any unpleasant witnesses that keep you awake all night, or is a badly needed inheritance still out of reach? ... hiring a pledge killer solves almost any problem where it occurs.

The utility of using online communications to hire a hitman as a means to reduce personal risk was noted in several advertisements, as with this quote from Vendor 13:

Most hitmen on dark alleys require a 50% cash advance payment before the murder to protect them against losses from non-payment. You can't do much about it if the hitman takes the money and vanishes. No risky meet-ups are required. On the internet, you are anonymous.

These comments reflect the perceived value in going through online sources to identify a hitman as they minimize the traditional risks observed by research on real-world contract violence (Revitch and Schlesinger 1981; Schlesinger 2001).

Given the virtual nature of these services, it is critical that the customers be able to communicate the essential details of their potential contract to the vendor. Only eight advertisements (33.3%) specified the information that potential customers needed to provide as with the following language from Vendor 7:

We Will Need The Below Information To For A Perfect Job

- (1) Country and City of the order.
- (2) Gender, age, approximate height and weight of the victim, body build.



- (3) Social status. What it is, where and by whom it works, whether it has a business. Is a publicly known person?
- (4) Is there security or permanent escort?
- (5) Moving on foot or by car?
- (6) Live in a high-rise apartment building or in the private sector? Territory protected or not? Is the territory fenced or not? If a high-rise building, is there a concierge?
- (7) What exactly do you want to order? Shooting with the character of intimidation (street, without silencers, automatic weapons), or a quiet shot at the skull at an entrance, for example, from a pistol with a silencer. Slaughter in the usual way or with the game on the video surveillance cameras working out the dramatization of the robbery. Abduction with the disposal of the corpse. Want to consider the option of food poisoning or transdermal poisoning method.
- (8) Confirm that you understand and accept our conditions and you will not be able to replay anything in the course of communication.
- (9) What city are you in? You need to know this. In order to advise you on making payments in Bitcoin, you must purchase it at our account in the online exchanger, for example, for fiat money.

The overtly illegal nature of these services may generate concern among potential customers whether these advertisements were established by law enforcement. To help clarify the nature of their services, five (20.8%) advertisements took steps to demonstrate their legitimacy. For instance, Vendor 21 stated:

[This site] is not a police honeypot since all members remain fully anonymous . . . We do not meet customers in the real life and we don't ask for their names, credit cards, or bank account information. Since we do not have any information about the customers, we cannot arrest them. In the unlikely case that the site gets hacked, law enforcers cannot arrest the customers.

A small proportion of vendors signaled their legitimacy through direct mentions of their military background (n = 11; 45.83%) or ties to mafia and criminal lifestyles (n = 7; 29.16%). Those ads stating military credentials were somewhat simplistic, as with this ad from Vendor 15 who noted: "Military Training = Assassination Services = Contract Killer." Another vendor stated: "We have ex-military hitmen who handle more complicated tasks. They are also suitable for overseas assignments."

Those ads including connections to criminal organizations or backgrounds were somewhat more detailed, as with this example from Vendor 13: "Most of the killing is done by low-level gang members who use a handgun and a hooded jacket waiting for the victim in a parking lot. We also can offer you smart assassins who make it look like an accident." Similarly, Vendor 18 stated: "We are an international body of hitmen, having hitmen connection in about 37 countries around the world and associates who are mafians in different countries and has power and connections within their jurisdiction." Many vendors (n = 14; 58.33%) indicated that they operated a network of killers or operators who could service client needs. For instance, Vendor 3 stated:

We take jobs from different parts of the world. Our hitmen are always willing to travel to locations where slayers are non existent ... We currently have 48 hitmen on call therefore we would assign you the available and most convenient hitmen according to your location

Individuals who did not have such language often indicated they were single operators, using a single name or first-person language in the advertisement. This was evident in an ad from Vendor 9, which stated: "I did not choose that life, but this is my destiny and i accepted it . . . I killed my boss. The main reason behind all that was my poverty. Then, the woman provided me with her husband contacts. And who kill once, can kill thousands of time."

Five vendors (20.8%) in this sample of ads noted that they were seeking to expand their ranks and accepted applications from individuals who wanted to be killers. The language regarding hiring varied from very detailed to simple contact forms. Two of the advertisements also requested that applicants



provide video proof of their ability to utilize firearms and shoot effectively. This was evident in the language from Vendor 5, which stated:

If you wish to apply as a contractor then all you need to do is send us an email with what region you are from. what guns you own and a link to a video with you shooting each of your listed guns. If you are Ex-Military then we will ask multiple questions for better proof.

Despite the majority of vendors in our sample being hosted on the Dark Web, only 14 advertisers (54.33%) utilized secured communications to connect such as through encrypted email address. In addition, 13 (54.16%) vendors also used non-secured communications, including online form submissions on their site. Interestingly, all open web providers utilized non-secured contact methods, including unencrypted email addresses, phone numbers, Whatsapp contacts, as well as online contact forms. The importance of encrypted messaging was highlighted in language from Vendor 2, stating:

We have decided to use Bitmessage for client communications . . . Bitmessage is a protocol that implements some of the ideas of Bitcoin into communications. Bitmessage is like Bitcoin in that it is a decentralized, peer-to-peer protocol. Unlike using an add-on component for email similar like Pretty Good Privacy (PGP), Bitmessage is a unified system that encrypts every message. And on top of that, it keeps secure the members of the communication: not only is the content of messages protected, but the sender and receiver of those messages is kept

Most vendors (n = 17; 70.83%) indicated that they accepted bitcoin (BTC) as payment, as observed in an ad by Vendor 3: "Payment is made in bitcoins to ensure maximum privacy." A proportion (n = 9; 37.5%) would use or accept escrow payments to ensure both the vendor and client were satisfied. This was exemplified in an ad by Vendor 21:

All payments are made through Bitcoin in order to protect your identity and most importantly, we can not move the funds out of your account without your approval . . . Our Escrow Service is similar to a safe box with two keys. You put the money into it, one key is kept by you, and we retain the other one. This means the funds cannot be released without your approval.

Though advertisements explicitly stated that the vendors would provide contract killing services, 16 vendors (66.66%) indicated that they would do more than simply perform murders. For instance, Vendor 18 stated: "we are good at tracking our victims and offer various forms of services depending on what our clients want, aside terminating lives we also offer kidnaping services and severe torture to the targets and many other services." To that end, 10 (41.66%) vendors noted specific activities that they would either not do or targets that they would not kill. Vendor 6 stated: "I do not torture. I do not kill 1st and 2nd class businessmen/managers or politicians or related to them (including females). I do not hide targets. I do not kill targets in southern Italy." Vendor 21 also noted: "We don't accept orders to kill children. We consider them innocent and it is unlikely for anyone to pay for their death."

A small proportion of vendors (n = 5; 20.83%) also offered the ability to provide proof that the contract was completed to their customers. For instance, Vendor 20 explained: "When the job is done the hitman will send us proof, and we send it to you, along with a link. You can also check local news or friends; as you probably personally know the target and you can check him out if is dead." Also, Vendor 1 stated: "We only publish information on conducted assassinations after six months and only if a case raised public interest and with the explicit consent of our client." One vendor even went so far as to include links to several news stories of people who were killed in unsolved forms of strangerbased violence. This was relatively exceptional and may reflect a poor attempt by the vendor to demonstrate their legitimacy.

Services and pricing

Slightly more than half of all vendors (n = 14; 58.33%) indicated their prices, with most of these vendors (n = 11; 78.57%) explaining how those prices are structured. Most of all vendors required upfront payments (n = 18; 75%) for service, though the amount or percentage varied based on the vendor. For instance, Vendor 4 clearly explained their payment process: "half-price and expenses, to pay before the job, you can meet me for free and then you can pay me the advance money whenever you decide to proceed. half-price, to pay in meeting after the job is done." In addition, two vendors indicated that they required upfront consultation fees, with one ad explaining:

We are receiving more and more contact requests from time-wasters (sorry folks), just asking inappropriate questions . . . This is costing us valuable time. As from today we will impose a 250 USD consultation fee to discuss your personal case via Bitmessage. The consultation is for informational purposes only without any obligation.

Only three vendors (n = 12.5%) noted situations where they would provide money back to the person seeking a contract. For instance, Vendor 21 stated: "If the hitman fails to complete the task for any reason, we can either ask the customer to withdraw the funds or we may decide to assign a different hitman to do the job."

The pricing provided by vendors in their advertisements enabled an analysis of the average cost of contract killings delineated by the quality of service (see Table 2). These categories approximate the hitman typology established by Revitch and Schlesinger (1981): amateurs, semiprofessionals, and professionals. Low-end, or amateur, hitmen range from 5,000 USD to 77,116 USD per hit on average, with the average price being 23,302 USD. Only one website offered a standard, or semiprofessional, hit service, which was priced at 12,000 USD. Professional services varied across the three platforms that offered it. The minimum price assigned to professional hits was 20,000 USD, while the maximum was 120,000 USD, with the average 53,333 USD.

These pricing models reflect some significant differences from what has been observed with off-line contract violence pricing generally (Cameron 2014; MacIntyre et al. 2014; Mouzos and Venditto 2003). First, minimum prices for contract killings advertised online were higher than those for inperson solicitations. Second, the average price for "low-end" killings was substantially higher than that of in-person pricing. As a result, consumers would still pay more on average for online solicitations. It is unclear if this is intended as a premium for the privacy afforded by the Internet or a potential indicator of risk to consumers. At the same time, there was some consistency in the maximum advertised price in online solicitations relative to what has been observed in off-line negotiations (Cameron 2014; MacIntyre et al. 2014; Mouzos and Venditto 2003). Thus, highly skilled hitmen across these platforms appear to have a consistent valuation of their wages.

The pricing relative to the use of different types of instruments to complete the act of violence was also examined (see Table 3). Hits completed using a poisoning agent were the most expensive, with an average price of 35,300 USD. The least expensive hits were physical hits using brute force via a blunt

Table 2. Listed price by quality of service.

Quality of service	Mean	Median	S.D.	Min	Max	Ν
Low-end	\$23,302.41	\$12,500.00	\$26,518.86	\$5,000.00	\$77,116.90	7
Standard	\$12,000.00	\$12,000.00	N/A	\$12,000.00	\$12,000.00	1
Professional	\$53,333.33	\$20,000.00	\$57,735.03	\$20,000.00	\$120,000.00	3

Note: All prices converted to USD. Ranges of values were converted to the average of that range.

Table 3. Listed service price by weapon used.

Weapon	Mean	Median	S.D.	Min	Max	Ν
Gun	\$18,625.00	\$17,500.00	\$14,416.79	\$5,000.00	\$45,000.00	6
Knife	\$23,000.00	\$23,500.00	\$2,449.49	\$20,000.00	\$25,000.00	4
Poison	\$35,300.00	\$40,000.00	\$13,479.61	\$11,500.00	\$45,000.00	5
Bio	\$7,000.00	\$7,000.00	\$0.00	\$7,000.00	\$7,000.00	2
Acid	\$6,875.00	\$4,750.00	\$5,513.24	\$3,000.00	\$15,000.00	4
Physical/blunt object	\$2,333.33	\$2,000.00	\$816.50	\$816.50	\$4,000.00	6

Note: All prices converted to USD. Ranges of values were converted to the average of that range.



object, with an average price of 2,333 USD. Surprisingly, the average price for the use of a gun, the most common method used to complete a hit off-line (Mouzos and Venditto 2003), was lower than the average price for a low-end hit, though the difference was relatively small. Additionally, the median price for gun violence was slightly higher than the median price for a low-end hit, illustrating that the difference may be driven by outliers in the overall pricing models observed.

Though research on off-line solicitations of contract killing does not compare prices across the types of weapons used by the contractor, they have compared the frequency of types of instruments used (Corsaro 1998; MacIntyre et al. 2014; Mouzos and Venditto 2003). Guns were the most common type of instrument used to complete a hit, followed by knives or blunt objects. Corsaro (1998) observed two hits completed using drowning, though this method was not explicitly mentioned in any of the online advertisements. Additionally, no contract violence involved a biological or chemical weapon (e.g., acid; Corsaro 1998; MacIntyre et al. 2014; Mouzos and Venditto 2003), though these services were offered online. These discrepancies point to a changing landscape of contract killings, facilitated by online marketplaces.

The prices associated with specific types of injury that may be commissioned during a particular act of violence were also analyzed (see Table 4). Castrations were the most expensive injury, with an average cost of 31,667 USD. Torture of a particular victim cost 17,500 USD on average, which is less expensive than having someone killed using a gun. The cost of blinding or crippling and/or paralyzing a victim was 16,667 USD and 10,250 USD on average, respectively. Arson and beatings were the least expensive, averaging 3,667 USD for arson and 2,333 USD for beatings. Finally, the prices associated with special targets demonstrate distinct differences across vendor services (see Table 5). Only one site offered to perform a hit on a child, priced at 10,000 USD. Four advertisements offered to commit acts of violence against politicians, for an average price of 212,500 USD. This price may reflect the inherent risk involved in targeting a notable public figure.

Discussion and conclusion

The development of the Internet has enabled the formation of distinct markets for illicit products that have traditionally been sold in physical space, such as drugs and sexual services (Flamand and Décary-Hétu 2019; Holt et al. 2015). These changes have led researchers to consider how online market operations may be a risk reduction strategy on the part of criminals (Aldridge and Askew 2017; Holt et al. 2015; Moeller, Munksgaard, and Demant 2017; Morselli et al. 2017). The anonymity and privacy afforded by web-based communications and payment mechanisms may decrease the potential for

Table 4. Listed service price by method of hit.

Method	Mean	Median	S.D.	Min	Max	Ν
Torture	\$17,500.00	\$17,500.00	\$6,454.97	\$10,000.00	\$25,000.00	4
Beat	\$2,333.33	\$2,000.00	\$816.50	\$2,000.00	\$4,000.00	6
Cripple/paralyze	\$10,250.00	\$9,250.00	\$7,789.42	\$2,500.00	\$25,000.00	6
Blind	\$16,666.67	\$11,000.00	\$11,590.23	\$9,000.00	\$30,000.00	3
Castrate	\$31,666.67	\$30,000.00	\$2,886.75	\$30,000.00	\$35,000.00	3
Scare	\$5,666.67	\$1,000.00	\$8,082.90	\$1,000.00	\$15,000.00	3
Arson (car or house)	\$3,666.67	\$2,000.00	\$2,886.75	\$2,000.00	\$7,000.00	3

Note: All prices converted to USD. Ranges of values were converted to the average of that range.

Table 5. Listed service price by status of victim.

Victim status	Mean	Median	S.D.	Min	Max	Ν
Child	\$10,000.00	\$10,000.00	N/A	\$10,000.00	\$10,000.00	1
Politician	\$50,000.00	\$500,000.00	\$4,218.35	\$212,500.00	\$150,000.00	4

Note: All prices converted to USD. Ranges of values were converted to the average of that range.



detection from law enforcement that is typically present in physical spaces. However, the same anonymity and privacy makes transactions inherently riskier for all participants. Vendors and consumers are then forced to find ways to manage that risk (Aldridge and Askew 2017; Holt et al. 2015; Moeller, Munksgaard, and Demant 2017; Morselli et al. 2017).

Though research has grown around online illicit market operations, few have considered the way these resources are used by individuals interested in engaging in contract violence (Volpicelli 2018). A small body of research demonstrated the inherent risks involved for both contract violence providers and clients due to the illegal nature of the arrangement and their knowledge of one another's identities, while vendors face the risk of harm while engaging in the act of violence (Cameron 2014; MacIntyre et al. 2014; Mouzos and Venditto 2003; Revitch and Schlesinger 1981). Moving to online environments may reduce the likelihood that both parties can identify one another, though it may increase the risk of loss on the part of customers seeking services. This study sought to examine the extent to which online advertisements for contract violence reflect the dynamics observed in off-line solicitations between vendor and client using a sample of 24 websites collected from both the Open and Dark Web.

The findings demonstrated that online advertisers highlighted the value in their services because of the anonymity afforded to both parties. This was reflected in the use of encrypted communication channels by some vendors, as well as Bitcoin as a payment method, similar to what has been observed in other criminal markets operating on the Dark Web (Aldridge and Askew 2017; Copeland, Wallin, and Holt 2020; Flamand and Décary-Hétu 2019). The fact that a portion of vendors noted how their services were insulated from police investigation may have also been employed to illustrate the value of online over off-line transactions.

In addition, vendors attempted to demonstrate their professionalism, often through mentions of criminal associations, the mafia, or military backgrounds. By emphasizing these ties, vendors are able to leverage the legitimacy of well-known organizations to signal their credentials. This mirrors the general nature of contract violence observed in off-line negotiations, with individuals suggesting their semiprofessional or professional experiences with criminality and violence (Revitch and Schlesinger 1981). The fact that a small number of vendors indicated they were seeking to hire additional contract violence providers, and listing a potential applicant's preferred qualifications, may be an attempt to further demonstrate their professionalism and legitimacy.

This study also demonstrated the range of pricing for online services, and its differences from prior research based primarily on newspapers, news websites, and other media (see Corsaro 1998 for exception). The pricing models observed suggest that risk and uncertainty are offloaded to the customers who would have to pay higher than average prices through online service providers. This is different from other research on physical products such as firearms (Flamand and Décary-Hétu 2019; Smirnova and Holt 2017), as they appear to be closely aligned with the overall market value of the product. At the same time, high-tier, professional hitmen observed in research from real-world contract violence negotiations were similarly priced to what was observed among digital advertisements (Cameron 2014). Thus, online market advertising may reflect a natural evolution from the off-line world of contract killing, rather than an entirely distinct phenomenon. More research is required to explore this issue, utilizing interview methods with advertisers when possible to assess their claims (Copeland et al. 2019).

Taken as a whole, this analysis suggests vendors take some steps to highlight their legitimacy which runs contrary to media reports suggesting all advertisements are false (e.g., Volpicelli 2018). In fact, the pricing structures and general language of contract violence advertisements suggest there may be two issues at play with regard to vendor legitimacy. First, it may be that vendors who presented themselves as a legitimate service provider through their websites were attempting to build trust and establish legitimacy based on price. In this case, consumers may be willing to pay a legitimacy premium for the services solicited online or the perceived anonymity of the interaction. Online advertisements were also more transparent about the range of services offered, including the use of torture and physical assault rather than homicide. Consumers may be willing to pay more given that they are able to designate the instrument, injury, and type of target related to the hit.



Second, evidence from markets where individuals sell stolen personal information suggests that vendors whose price points are too high relative to the broader market may be less reputable and intentionally structured so as to gain the greatest reward from unknowing customers (Holt et al. 2015; Hutchings and Holt 2015). This same relationship may be evident in hitman advertisements, as there is no necessary way to validate vendor claims. Advertisements suggested they would not provide evidence of prior successful acts of violence up front and would only provide customers with limited evidence of any contracted violence they paid for. As a result, customers for contract violence providers online appear to accept substantial economic risk in the event that vendors do not deliver on their contract.

In order to address these issues, there is a need for greater research on the issue of contract violence advertising online. At present, only media reporting on hitmen services have claimed that their services are not legitimate through investigations of service providers (Volpicelli 2018). There have been few if any published assessments of vendors or their customer base, calling to question when and how individuals come to solicit on-line service providers. Further study is needed employing both overt and covert research methods to assess their claims. For instance, overtly attempting to interview service providers may be an effective way to understand how and why they structure their prices and why they operate in specific ways. Covert means may also be of value, such as contacting service providers to assess the extent to which vendors may negotiate or prove their legitimacy beyond what is provided through their websites. Regardless of the method, such inquiries are vital to improve our understanding of the state of operations for and legitimacy of contract violence specifically and illicit market processes generally.

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