

fbi Most Wanted Girlfriend: The Futurist Model of Fugitive Trans Hacker and Merchandiser Maia Arson Crimew's Meaning Making

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Abstract: We are used to hearing about cybercriminals promoting themselves, but what if the merchandise a cybercriminal made about their own hacking experience revealed more about who they are? American law enforcement officials indicted Swiss trans hacktivist maia arson crimew in March 2021 for over a dozen hacks where she publicly disclosed proprietary information from more than a hundred organizations. Officials noted the profit from “hacking-inspired clothing” she created as an overt act in her criminal conspiracy. This practitioner’s case study applies theoretical frameworks of psychological ownership and egocentric categorization, to explore how possessing products and creating products communicates the kind of person you are and the kind of person you want to become, suggesting maia’s merchandising may have been how she made meaning rather than a criminal act in a conspiracy. This practitioner’s case study will analyze samples of her merchandise within these frameworks. This paper will provide further context for that analysis with review of a sample of her podcast interviews in the immediate years after her indictment. This practitioner’s case study suggests that applying these alternative frameworks to behavioral analysis of cybercrime personalities like maia that proclaim a range of motivations and identities, could provide greater insight into increasingly diffuse hack-and-leak narratives across cybercrime communities.

Keywords: Psychological ownership, Egocentric categorization, Hacktivism, Cybercrime, Meaning-making

1. Introduction

There is difficulty in behaviorally analyzing cybercriminals, who are often anonymized or masquerading as various personalities to misdirect investigators.

The author as a former certified profiler with the Federal Bureau of Investigation’s (FBI) Behavioral Analysis Unit (BAU) would often have to rely heavily on general theoretical frameworks of human behavior, when trying to provide some behavioral insight into the personality and decision making of an unknown cybercriminal. Sometimes a handful of behavioral artifacts can provide “thin slices” of demonstrated behavior about someone, enough to suggest anticipated responses to a recommended approach online (Ambady and Rosenthal, 1997).

Much of the cyber threat intelligence industry understandably focuses on tools and techniques demonstrated by attackers, so generally alternative behavioral frameworks are not considered in analysis of an attackers’ motivations and anticipated behavior online.

This practitioner’s paper will demonstrate an abbreviated model of behavioral analysis on cybercriminals, including a case study on a known cybercriminal who may be one of the only hackers in the world who created merchandise related to her hacking experience. This model reflects the author’s prior approach in the BAU.

This case study provides an opportunity to consider how alternative theoretical frameworks, in this case psychological ownership and egocentric categorization, can provide further behavioral insight into attackers.

Pierce, Kostova, and Dirks (2002) reexamined the past century of research on psychological ownership, namely how the “attitudes of ownership” have been shaped culturally and contextually over several decades. Many of these approaches have explored the meaning of and role played by possessions in someone’s life. Morewedge (2021) suggested that we can have a “living relationship” with the objects we possess that we consider important or special.

There is an affective context to what we feel we own or possess or what we do literally own or possess, so psychological ownership could include consideration of the loss aversion we might experience if we lost that possession, or it was taken from us (Shu and Peck, 2011).

Belk (1988, 1989) established much of the foundational work on possessions as a sense of self or an “extended self”. Belk referred to prior research that found that as people age, they increasingly characterize possessions as “special” the possessions that symbolize other people, such as gifts from people or photographs of people. Belk noted that this suggests possessions not only represent some aspect of our self, but possessions appear to be instrumental to the development of self and our sense of the past (Ladik, Carrillat, and Tadjewski, 2015). These are all considerations of psychological ownership that are relevant in this case study.

There are limits to not only the egocentric view someone has of themselves, but how the author sees them. Those limits can arguably distort or mistakenly frame representations of someone else such as maia, because there is much the author does not know about how maia thinks and feels about some of this merchandise and the experiences of maia's life in the past few years. Karniol (2003) pointed out that we must also consider our own experience in our analysis of someone else because "experiences are phenomenologically given, rich in context, and have a deep emotional texture". The author presumes maia could say likewise about herself.

This practitioner's paper discusses related research literature on egocentric categorization and psychological ownership. That research will frame the behavioral analysis of maia based on her podcast interviews and analysis of her merchandise based on these theoretical frameworks.

2. Related Work on Egocentric Categorization and Psychological Ownership

Weiss and Johar (2018) defined egocentric categorization theory as a demonstration of how owning or possessing a product can influence or change the way we think about that product and the way we think about and represent our selves. When we judge a product to be creative and we own that product or "feel" ownership over that product before we have it, we tend to see ourselves as creative, too, for example. Likewise, because we own a particular product that we judge to be creative, we may have a heightened sense of being creative, whereas if we did not own that product, we may see ourselves as less consistently creative.

There are similarities between egocentric categorization theory and psychological ownership, which more generally refers to feelings we may have about a product and ourselves (Pierce, Kostova, and Dirks, 2002). Egocentric categorization is a much more concentrated influence on our self and how we change.

There is greater reference to the consequences of psychological ownership in literature, meaning that someone may feel they own or possess something even if they do not have any claim over it, and that can result in distorted perceptions of our self and the choices we make because of that perception (Vandewalle, Van Dyne, and Kostova, 1995). Weiss and Johar referred to Burris and Rempel (2004) who suggested that possessions can not only become part of the self but also mark a "psychological territory" where similar others might feel connected to them. Some people experience feelings of ownership vicariously through others (Tu and Fishbach, 2016). Weiss and Johar highlighted how marketing practices that foster psychological ownership such as co-design methods and customization options can influence customers to potentially "gain psychological ownership" over that product because they participated in the creation of a product customized for their self.

Referring to Huang et al. (2009) and Kahnemann et al. (1991), Weiss and Johar noted that generally people find the products they own by their own choice to be more attractive and more valuable because that product association suggestively enhance those qualities about them.

In contrast, Weiss and Johar (2016, 2013) have found that people tend to "deactivate" or disassociate products that they believe are inconsistent with who they think they are and who they want to be seen as.

Heath, Ennew, and Tynan (2015) explored some of the different contexts to giving gifts to ourselves. Referring to Holbrook (2000), Heath et al. highlighted that "self-gifts" often involve "consumption experiences of intrinsic worth", meaning *self-gift giving* can be distinct from ordinary personal purchases.

Heath et al. referred to Mick and DeMoss (1990) who defined "self-gifts" as symbolic and self-oriented and "justified by the consumer because of the contexts in which they occur". Mick and DeMoss noted that self-gifts include "context-dependent emotions", both before and after giving a gift to yourself.

This approach to characterizing self-gift giving adds dimension to this paper, considering if the costs maia may have experienced because maia made hacking merchandise that reportedly did not sell well reflected the motivation for making this merchandise. Law enforcement officials noted this merchandise as evidence of maia's conspiracy to commit the cybercriminal acts maia was indicted for. But was maia trying to profit?

Heath et al. found that there is often a "compensatory or therapeutic nature" to this kind of self-gift giving to justify the cost of that gift. Heath et al. also considered other categories of self-gift giving, such as "to remember" or "to feel loved or cheered up". This paper questions if maia made merchandise related to maia's cybercriminal reputation for these reasons, rather than to make money.

People generally do not experience psychological ownership over a product when it is assigned to them. When they choose their product, they do. This may be reflected in maia's merchandise design and production, as law enforcement officials tried to characterize maia with an indictment and other criminal legal language.

Perhaps in the context of this paper, Belk discussed how possessions help people “manipulate our possibilities” and present ourselves in a way that asks for feedback from others in ways we could not ask openly.

3. Behaviorally Analyzing Maia Arson Crimew’s Self-Concept Based on Maia’s Public Podcast Interviews and Social Media Content

The origins of behavioral analysis are based in victimology and criminology, but applying these frameworks to maia is more comparable to grounded theory. The approach is transdisciplinary, often including not only experience in operations and investigations but also a range of research literature and practice.

Malin (2021) established some leading work on digital behavioral criminalists and cyber behavioral analysis. Malin illustrated the parallels to established theories on pathways to intended violence, for example, but also how this pathway aligns with and includes other considerations within a cyber context. Those pathways would examine an offender’s behaviors throughout some historical and contemporary period, including behaviors that are unrelated to criminal activity or victimizing people or techniques. Generally, even outside circumstances where there is no intended or actual violence, this pathway is useful for analyzing everyday behaviors online and how users engage with people.

This is a starting point for behavioral analysis. Each case should include an effort to explore any research that might explain a cybercriminal’s behavior, especially when that cybercriminal is unidentified or there is limited information on that cybercriminal.

For example, while the criminal behaviors in this example did not involve pirating DVDs or soft lifting Netflix passwords, the historical conceptual frameworks developed on piracy behaviors could suggest how maia may be making sense of maia’s everyday experience, especially in relationship with the other hackers she worked with to accomplish some of the leaks she promoted. Evaluations of people demonstrating piracy behaviors used to be largely based on moral judgments of their decision to pirate materials (Limayem et al., 2004; Al-Rafee, Sulaiman, and Cronan, 2006; Shore et al., 2001). More recent research on piracy behaviors have found that someone’s attitude towards piracy has a greater impact on their decision making than someone’s moral or ethical beliefs, for example. What someone’s peers think and what they perceive the consequences to be of engaging in piracy appear to influence someone’s behavioral intentions toward piracy more than most factors (Ahadiat et al., 2021; Serenko, 2022).

This paper reviewed several of maia’s public interviews on podcasts to behaviorally analyze her self-concept, or the way she sees himself and wants others to see her. While the author recognizes that information is limited, maia’s choice of podcast interview suggests some preference on her part for talking to people she may trust or feel like. This can also reflect her self-concept. The first evaluation of someone’s self-concept are personality traits that are observable and seen often (Baumeister, 1999; Rosenberg, 1979).

maia is humorous and pithy, no matter what the topic of discussion. maia shared a story on a podcast of a recent article by a UK news media publication that claimed it reached out to her for comment, but maia said there was no real attempt. maia said when “right-wing rags reach out I don’t give them what they want...I tell them to suck my dick”. maia is demonstrably nostalgic, not only referring to the internet as freer and more decentralized as a true subculture in the past that “felt like a frontier”, but in how she enjoys talking about hacker subculture movies like *Hackers* as a frame for much of her opinions and humor on popular culture and the government and her own experiences. “I’m a part of that culture”, she said in another podcast interview.

She is personable and informed. maia displayed vulnerability at times. When talking about supporting the mental health of peer hacktivists and other people who have faced prosecution or investigation by law enforcement, maia referred to her own experience of Swiss law enforcement searching her home following her indictment in a US court.

“...it fucks you up...I am incredibility traumatized”.

With some baseline for the surge in attention on maia following some of her disclosed leaks and her indictment, when she said in a podcast interview in 2023, “I’m just a swiss girl in a tiny fucking country”, there is demonstrably less coverage on maia at the time of this paper and arguably maia is not as publicly discussed as she was before. maia mentioned in one of her podcast interviews in 2023 that she was somewhat involved in an “Anonymous-adjacent” campaign to undermine the Myanmar government in approximately 2021, because of that totalitarian government’s efforts to control people in that country. maia explained she

brought up this support because she believes there are causes where hackers should collectively help people who need help or people who do not have a voice. maia has called herself an anarchist previously, which reflects some perspectives on anarchism that suggest anarchists try to help people however they can outside of more traditional or even legal methods. maia's disclosures of data appear to be consistent with this, too.

The author understood this was likely some form of impression management, but whatever an individual chooses to share or not share is behaviorally suggestive of his or her self-concept (Hinds and Johnson, 2019). The author considered how this cybercriminal wanted to see herself, or her aspirational self. People are most responsive to others who speak to them as if speaking to their aspirational or ideal self.

maia was described in a podcast interview as "cyber punk as fuck". The podcast hosts asked her if she will take responsibility for the cyberpunk future. She said, "I don't want to be a spokesperson, but I have a chance to speak for a group of people who can't". maia has said, "...at the end of the day we are tech support for the revolution". Whether she believes that is unclear, because maia has arguably had a significant impact on the protection of that information. There is suggestion that maia at times may believe she is more than just "tech support" for the so-called revolution, as people have praised her for her disclosures. People continue to donate money to her and to praise her in posts.

maia talked further about her indictment in a podcast interview and how she claimed she controlled the narrative by posting about the search of her home by Swiss authorities and indictment, rather than waiting for those agencies to release public statements on her indictment. She highlighted the US counterintelligence national strategy in 2021 that noted hacktivism as a form of independent activism was considered the top five threats to national security. maia found that to be funny as she mentioned that information in the context of how absurd that is to her, but those references in the interview and in her own everyday sensemaking suggest she is thinking about this and may want to project those perceptions to others.

A swiss news media channel published a short video interview on maia in April 2022 titled, "hacking as a tool for highlighting grievances", which the author does not agree reflects maia. maia in the interview described the "euphoria and adrenaline" she would feel when she was hacking into a sensitive database. She was asked in the interview why she leak some of the data she stole, such as data revealing insecure protections on databases holding security camera footage. She replied that she took it and disclosed it "for activist reasons". She explained that some data should be public when there is a public interest in that data. The interviewer asked why she hacked those databases if she knew it was illegal and that she would be punished. "This is the risk one always takes with activism...the point is to show what is right and what is wrong", maia said.

The author cannot determine from these public interviews how some of these experiences have influenced her meaning making, but as an example of the frames of maia that reflect her personality and her idealized self, she said in another podcast interview after discussing her theoretical McDonald's meal if she had to make one that she believes she has a "pretty strong moral compass". She said that is why she has ended up where she is, unable to leave her own home country. She is quick to make topics humorous, but there is often reference to more serious emotions and meaning making about who she is and who she wants to become. maia made another statement about her choices in another podcast interview where she said about herself, "You're ruining your life trying to make the world a better place".

The author also considered maia's possible sense of self-worth, by exploring her self-actualization. This is a familiar concept in psychology, characterizing how close someone may be to realizing their life goals and, more importantly, how close they *believe* they are (Rogers, 1959).

maia told another podcast interviewer in an episode titled "intervmeowing the catgirl hacker" that her advice for other catgirls was "don't meow at all if the feds are around". maia mentioned in this interview that she is "just floating through life and sometimes I end up on the front page". She was probably being lighthearted, but the author has questioned whether her impression of her own worth changed at all when the interview requests slowed and there was less attention on her.

4. Considering Maia's Psychological Ownership and Egocentric Categorization of her Hacking Merchandise

The author found an inventory of merchandise on teepublic.com. Much of the inventory of less than a dozen shirts and sweatshirts and design prints focused on statements related to the FBI.

Generally, this merchandise appears to reflect maia’s personality in her interviews, where she makes provocative, but humorous and pithy or glib statements. The design prints could be called sarcastic, but analysis of maia’s self-concept would suggest this merchandise is another example of her consistent presentation of herself as a less than serious role player in a larger drama.

maia features one design print with the statement, “venture anticapitalist”. maia would likely find it amusing that the author who is a former FBI agent and profiler with the FBI’s Behavioral Analysis Unit (BAU) would be attempting to explain what she means by “venture anticapitalist”, but for this paper, the author would suggest that this statement reflects her repeated attempts to expose the vulnerabilities of capitalist systems that collect much of our personal information and record us but then do not do enough to protect our information.

maia includes several print designs related to the FBI, such as “fbi most envied drip” and “fbi most wanted girlfriend”. maia has suggested in podcast interviews that the response by the U.S. government is overstated, which may reflect the design for these prints.

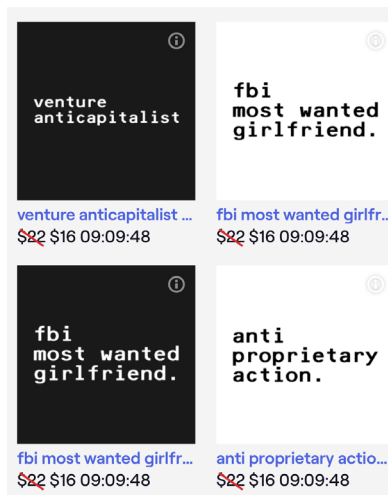


Figure 1: A screenshot of some of maia’s print designs

maia has another print design related to the FBI, “the fbi knows me, do you?” Again, perhaps maia is being funny, even though she has expressed in more than one interview that her experience because of the indictment has been traumatic. She said in one podcast interview that “cops” do not do anything considering how much money is funded for law enforcement. The author cannot be sure if maia’s anger towards law enforcement is largely because of her indictment and treatment by Swiss law enforcement, but arguably her communicated feeling on her experience is understandable. maia’s merchandise may be an “extension of self” because while her experience has been negative, she cannot separate that experience from how she has changed or made meaning from that experience and how people know her when before they perhaps did not.



Figure 2: A screenshot of one of maia’s print designs

The author questions whether these print designs and merchandise are “compensatory” or therapeutic in some manner for maia, as Heath et al. described self-gifts. There is arguably an emotional context to her experiences with the FBI and whatever she might be communicating in this merchandise. While the author may presume this merchandise was designed and sold before her indictment because law enforcement officials highlighted this merchandise as evidence of her criminal conspiracy to profit from her hacking, maia may have been trying to “gain psychological ownership” as Weiss and Johar described over her experience. What may be significant to maia’s shared narrative about her characterization of law enforcement and “surveillance capitalism” is how her suggestive attempts to “stay silly” as she has created in stickers with these print designs, resulted in furthering the charges against her.

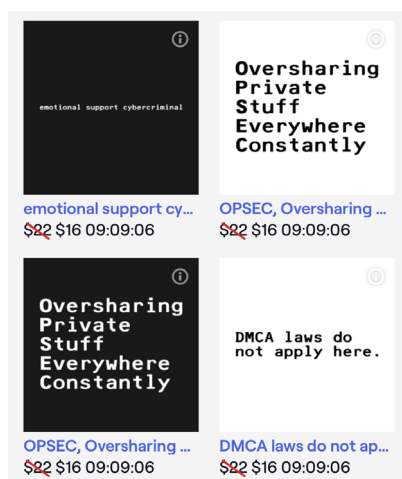


Figure 3: A screen shot of some of maia’s print designs

Weiss and Johar characterized psychological ownership as a framework that can explain how we might consider the products we own to represent us in some way. They explained further that egocentric categorization can even change the way we think about ourselves and that product depending on if we own or possess it or not or even if we ‘feel’ ownership or possession of that product. The author recognizes there is too much we do not know about maia to be able to determine how the merchandise she created may have influenced her meaning making. The author did request an interview with maia, but she eventually ended correspondence before that interview was scheduled. These frameworks suggest however that the merchandise reflects her sensemaking over time and how she and communities that revere her might respond to law enforcement efforts to deter her disclosures online.

5. Discussion

The author’s former role as an FBI profiler involved providing behavioral analysis on known and unknown personalities allegedly involved in cybercrime. While the author had a background as an investigator prior to becoming a profiler, the author’s approach as a profiler was to focus on behavior rather than investigative techniques.

This paper is not a critique of the indictment and criminal investigation of maia arson crimew, but a reexamination of some of the basis for claiming her merchandising products notionally about hacking that she may have profited from were an overt act of her alleged criminal conspiracy. Rather than just being an investigative footnote or another step in whatever threshold there may be in criminal code and statutes, maia’s merchandising represents another look into her personality and her motivations. Indicting someone is generally a step taken once it has been determined that the subject of an investigation will not cooperate or agree to talk to investigators first, especially in cases where the subject is not necessarily violent or posing any threat to the public. The alternative perspective on maia’s personality and motivations suggested in this paper also suggest that maia may have been responsive to a different approach by law enforcement and that the efforts to deter her and her followers were not necessarily successful. While maia cannot leave Switzerland, maia has not appeared to change in her beliefs and what she is or what she might be supporting that may still be criminal. In fact, there is reason to believe she is more committed to her activist beliefs because of her experience with Swiss and American law enforcement.

Given the increasingly blurred or diffuse narratives used by a variety of cybercriminals and whistleblowers and other personalities disclosing or leaking information publicly, analyzing the behaviors and motivations of cybercriminals has arguably become more difficult. This would include nation state attackers who increasingly masquerade as hacktivists and cybercriminals.

Applying alternative frameworks in that behavioral analysis could augment efforts to provide insight into the claims and representation of cybercriminals and, importantly, help investigators identify additional behavioral vulnerabilities in those cybercriminals to guide investigative strategy and techniques that gain cooperation.

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