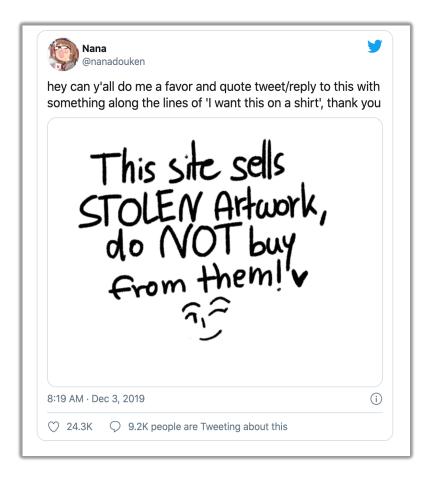
## T-SHIRT BOTS AND THE INDEPENDENT ARTIST: THE FIGHT AGAINST AUTOMATED INTELLECTUAL PROPERTY THEFT

Within illustrator, design, craft and art communities on social media, it isn't unusual to see some kind of self-promotion post, and it isn't unusual to ask followers to retweet or share a message, but it is atypical that followers are asked to tweet something that purposefully leads to copyright infringement. Yet, in December 2019 artists on Twitter asked their followers to join them in calling attention to a prevalent and frustrating problem almost any creator who shares their art (particularly images, drawings, and designs) faces: theft of their work. In this particular case, however, followers were not tweeting about a specific person, or website. This time the theft was automated and the designs scattered to numerous print-on-demand commerce sites.

When creators post their art (images, illustrations, calligraphy) on Twitter, followers often respond with "I'd love this on a t-shirt." This response occurred frequently enough that people began programming bots to find and scrape images associated with such tweets so they could be printed on t-shirts, and sold cheaply without crediting the artist. To confirm this theory that bots sought out specific phrases in order to generate t-shirt designs, artists who almost exclusively use internet platforms to share and circulate their work wanted to see how far they could push the algorithm. They wondered, in fact, if they could use it against the sites that profit off of their stolen designs.

Twitter user and artist @Nanadouken encouraged her followers to retweet an image she created that read "This site sells stolen artwork. Do not buy from them" accompanied with a smiley face. She suggested the retweet include "I want this on a t-shirt" or a similar phrase, since this is what the bots typically use as a search term (Ramos).



In under 24 hours well-known sites like ToucanStyle, GearPress, TeeChipOfficial and even store listings on Amazon were displaying shirts with the text declaring the image as stolen. The idea of using the algorithm against the bots was quickly taken up by other artists on Twitter who included memes and intellectual property of Nintendo and Disney with sayings like "Not licensed by the Walt Disney Company. This is NOT a parody! We committed copyright infringement and want to be sued by Disney. We pay ALL court and tribunal fees" (Morris and Pressman). The move to fight the algorithms drew significant attention to the problems created by print-ondemand technologies; it also simultaneously shows the strain of participating in internet commerce as an independent artist, particularly as new t-shirt sites and listings with infringed designs show up across the internet almost daily. The internet offers numerous ways to distribute and sell creative work and allows creators to control the entirety of creative output. But what they can't control are the technologies, data, algorithms, bots being deployed to steal their work.

Since CafePress first launched in 1999 print-on-demand technologies have grown significantly. Most sites allow users to upload designs and then order it on mugs, t-shirts, bags. You name it; you can print something on it. These technologies complicate the Digital Millennium Copyright Act (DMCA) which protects online platforms from liability for copyright infringement simply for hosting user-uploaded digital content. This is why if infringement does occur, rights holders must request that each infringed item be removed from a site. Since most print-on-demand companies are transforming digital files into physical products, this further places the sites in a legal gray area. And the DMCA doesn't apply to trademarks or proprietary symbols like the Nike swoosh or the Nintendo "N," so infringed work shows up frequently on such sites. Many companies including Disney and Exurbia Films who owns the rights to Texas Chainsaw Massacre have dedicated departments to track unauthorized use of trademarks and copyrights (Sollenberger). Rarely does an independent artist have that luxury. In fact, independent artists are not able to utilize many of the systems in place to fight intellectual property theft.

Take, for example, the Brand Registry on Amazon. The Brand Registry allows corporations with registered and active text/word marks that appear on packaging, for example, to upload trademarks which help to combat counterfeiting. Independent artists cannot participate since works of art are considered copyrighted goods and are not trademarks like a logo. The "proactive brand protection" provided by Amazon's Brand Registry does not extend to them ("Eligibility"). Instead, they must resort to filing takedown notices which takes time away from creating. If the listing is removed, another one often shows up elsewhere on the site. Further, there's no consequence for stealing the designs in the first place. On other e-commerce sites like Etsy, members who receive repeat infringement notices have their account privileges terminated; no such rule seems in place on Amazon ("Intellectual Property Policy") Despite consistent violations, many Amazon sellers continue to post listings with stolen work.

Small business artists estimate they spend hours filing requests because there is no streamlined way to block bots or create recourse for sites which use their stolen designs, and lose thousands of dollars in the process (Tron). They must contact each site or platform individually (due to DMCA) to begin the takedown process of the infringed work. And while corporations like Disney have the money and power to fight intellectual property theft, independent artists simply don't. Deploying automated bots to sell cheap, ripped-off goods encourages a cycle where the artist is consistently infringed and cut out of the opportunity to make money. Though there is legislation that would make it cheaper for artists to pursue litigation in cases like the tshirt bots, there is growing concern that the CASE (Copyright Alternative in Small Claims Enforcement) Act of 2019 also potentially opens a wider door for copyright trolls to make copyright claims and extort money from average Internet users. The proposed act would create a Copyright Claims Board within the Copyright Office to hear infringement claims with no attorney required. The proposed process would work like this: the Copyright Office sends a notice about a copyright complaint with information about how to opt out of the dispute. If one does not opt out within 60 days of the notice then that individual is bound to whatever decision the Claims Board makes. The opt out process is not clear nor easy and there is concern that average Internet users may not know that they should opt out and thus risk a judgment without being able to present their side of things. There are also concerns about what the Copyright Office notice would look like and if it would be sent via mail, email, or phone. Though the Supreme Court ruled in *Fourth Estate v. Wall Street.com* that the copyright registration process be completed (granted or denied application) before infringement claims can be filed, such registration is not required to bring action under the CASE Act, leaving no guaranteed way to determine who holds the rights to work that is unregistered. If artists haven't registered their work in some way, this act has the potential to work against them (Adams).

In the past artists might have uploaded pixelated or watermarked photos but social media sites today demand high enough resolution for printing and clearly the bots aren't selective about what images they scrape and sell. Watermarks can, however, alert the buying public that the artwork on a t-shirt has not been licensed by the artist. But in the case of jewelry or other artist-designed goods, there aren't many proactive measures available. Unfortunately, the trends seem to be a consequence of doing business online. Artists depend on the Internet and the communities fostered by online spaces for support and commerce, but most are not well-versed in intellectual property and copyright law. Having their work stolen seems an inevitability, especially on image-driven sites like Instagram and Pinterest where artwork is circulated so often and so readily that it quickly becomes divorced from its source.

There is speculation over whether something like YouTube's ContentID which scans uploaded videos against a database of audio and video files uploaded by rights holders could be used to pinpoint infringement before it becomes part of a print-ondemand listing. Amazon already has image recognition technology but does not apply the software in the same way YouTube does to address copyright infringement. However, artists could deploy Amazon's mobile app which has a "search by camera" feature where customers can take a photo of dental floss, for example, and photo search Amazon for that exact floss. Artists could photograph their own artwork to quickly find listings with copyrighted images, which might cut down on the time it takes to discover their unauthorized work. Of course, they still have to write individual takedown notices for each listing and wait for Amazon to respond, but the tool could speed the initial process of recognition and provide proof to Amazon that the work has been stolen (Nguyen). T-shirt bots seem to be simply one new tool in automating intellectual property theft. They do significant harm to artists who do not have the resources to continuously fight the sites behind them. It's clear that artists need an alternative to the current copyright system. In a recent *Wired* article, Roger Sollenberger draws parallels to the royalty crisis in the music industry where licensing groups intervened and established revenue sharing agreements (Sollenberger). Whether a similar model could work in such a wide and diverse field remains to be seen. Independent artists may want to license some designs and not others or may not want to participate at all. Such a model also might reinscribe many of the same issues of power imbalance relayed in the t-shirt bots case since quality control cannot be guaranteed or regulated. Ultimately, the burden of protecting one's art whether it's illustrations, jewelry, photography, or other craft falls heavily on the creator who has to learn quickly about all the various ways her work can be stolen. The best approach, most artists suggest, is to have and promote an online store where creative goods can be sold directly to those who want to support your art.

The tension in craft e-commerce between industry and community is easily recognizable and is more frequently and more collaboratively discussed within small business and art communities than ever before. Seasoned makers create Pinterest guides, provide tips on watermarking content, using Etsy, and how to navigate some of the trickier legal issues that often arise (Jacobson). The emphasis on collaboration and reliance on other artists and craft communities seems to be a source not only of support but also of action. When legal avenues are not an option, crowdsourcing provides an outlet for frustration and calls attention to the struggle of individual artists who grapple with what it means to create and share their work in virtual worlds where there is little control over how their work is used or interpreted.

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