
A Case Study of Appropriation Diffusion in a Semi-Anonymous Network

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Abstract

This paper is a case study of SCRUFF, a location-based smartphone application for gay, bisexual, and queer men. The study uses SCRUFF as a tool for examining how appropriation works among a network of people who are largely anonymous and/or unknown to each other. It uses Everett Rogers's concept of diffusion of innovation to model and better understand how these appropriations are made and spread.

Author Keywords

Appropriation; LGBT; location-based social networks; anonymity; innovation diffusion.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous

A Case Study

The environment

SCRUFF is a location-based smartphone application for gay, bisexual, and queer men. Its primary visual feature is a grid that displays the users of SCRUFF that are closest to you (See Figure 1). The application was created in 2010, has over 8 million users, and is one of a variety of similarly designed applications (others include Grindr, Growlr, Jack'd, etc.). Uses of the application run the gamut from chatting to coordinating casual sex. I have been a SCRUFF user since 2010 and

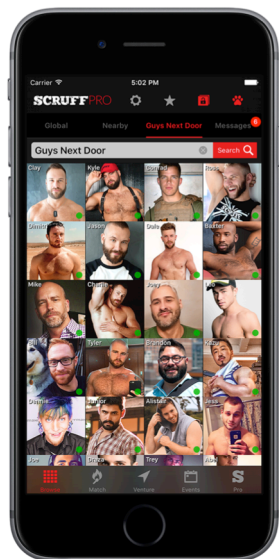


Figure 1: The grid of users visible when logged on to SCRUFF.

wrote my Master's thesis on the use of SCRUFF in rural areas of Michigan.

Adding +

When SCRUFF was first developed and deployed, the iTunes App Store had rigid guidelines that restricted material related to sexuality [8]. These guidelines prevented users from having sexually suggestive photographs on their profile and prevented SCRUFF from providing profile fields that enabled users to disclose their sexual preferences, such as sexual position (top, bottom, versatile) and HIV status. Users would often use text in their profile to circumvent this, such as, "I prefer the bottom bunk if it gets to that."

Due these policies, many HIV-positive (HIV+) men started putting plus signs (+) into their profile names. The plus sign was a way for these men to disclose their HIV-status before being contacted by other users who may not be interested in having sexual relationships with HIV+ men. I noticed this trend in 2011 and it has continued to this day. So in this way, HIV+ users of SCRUFF were doing what Dourish [5] describes as appropriation, or "making use of the technology for purposes beyond those for which it was originally designed, or to serve new ends" (p. 2). The restrictive guidelines of the iTunes App Store limited the design of the SCRUFF application and users created their own work-arounds.

Diffusion of innovation and group appropriation

While previous literature has looked at how groups of people appropriate technology for new uses [2][4], I found this literature to be lacking in explaining how groups of people who are relatively unknown to each other appropriate collaboratively. Specifically, looking

at the SCRUFF example, the question that frames my interest in this workshop and topic more broadly is, *how are appropriations spread through a network of users who are anonymous or at least largely unknown to one another?* In the following paragraphs, I review the concept of diffusion of innovation as described by Rogers [6] and use this concept to unpack how the "+" appropriation spread through networks on SCRUFF.

As described by Rogers, the diffusion of innovation is "the process by which an innovation is communicated through certain channels over time among members of a social system" (p. 5). The innovation in question here is the appropriation of "+" in a profile name to signify HIV-status. The communication is both the sending and receiving of the "+" message, so this could be the act of a user appropriating the symbol as well as a viewer understanding what the symbol represents. The channel and social system could be the user profile, SCRUFF, or a broader gay male online milieu.

Using Rogers's innovation-decision process, I hypothetically model his five steps onto the act of "+" appropriation in SCRUFF. First, a user views the inclusion of "+" into another user's profile and forms an understanding. Second, that user forms an attitude toward the appropriation, meaning they form an opinion. Third, if the appropriation is seen as something that pertains to the user (i.e. they are also HIV+ and this appropriation could be a useful way to circumvent conversations with HIV-phobic people), then the user adopts the appropriation. If the "+" is not relevant to the user (i.e. they are HIV- or they don't want to disclose their HIV status publicly), then they reject the appropriation. Fourth, if they have decided to adopt the appropriation, then they incorporate it into their profile

name. Fifth, a confirmation is made later on, based on the user's experiences with the appropriation, to continue or cease using "+."

The review of this concept and appropriation is simplistic, but I believe that it offers some insight into the process wherein an initial appropriation makes it through a network of anonymous or mostly unknown people. Specifically, the appropriation only needs to be understood and evaluated within the context of the individual making the decision. An appropriation or innovation can be divorced from the other users. Social ties (weak, strong, or otherwise) are not necessary for the appropriation to grow in its usefulness. In this case, an understanding of language and cultural context of HIV *is* necessary though.

Opening up for other appropriation

Based on my subjective observations, I noticed that once the appropriation of "+" spread through a SCRUFF location, other similar appropriations started popping up in the form of "=" or "-." Rogers would call these "re-inventions," where in my case an appropriation is taken and re-appropriated to serve a similar but slightly different purpose. A "=" came to represent HIV=, or that the user who adopted this symbol in their profile does not discriminate based on HIV-status. A "-" came to represent HIV-, or that the user who adopted this symbol was HIV-. While the appropriation of "+" and "=" were social contributions to combating stigma against HIV+ people through visual advocacy, the adoption of "-" were seen by many in the community as missing the point. The appropriation in this case should be progressive and serve the needs of those who are stigmatized in the community, where similar appropriations can be seen as inappropriate.

Other appropriations that have come up in my research are less visual and therefore less collaborative (due to the visual nature of SCRUFF). Some rural interviewees used the app to keep in contact with friends in other areas of the state due to the lack of a local community. In the case of one user I interviewed, he actually reconnected with a friend he hadn't talked to in decades.

Negative Effects of Appropriation

Unfortunately, appropriation is not always a good thing. Police in Egypt have used Grindr, an application very similar to SCRUFF, to triangulate the location of gay men and arrest them for illegal behavior [7]. These apps have been also been used to find vulnerable gay men to harm. In 2013, an elderly gay man was murdered in Ann Arbor, Michigan after being robbed by people he had met through Grindr [3]. Though we often think of appropriation of technology as a positive thing, a way for users of technology to meet their needs, it is clear in these two cases that appropriation can also be harmful.

Questions for the Workshop

Inspired by the literature on appropriation for sustainability [1], *how can appropriation be used for broader social justice issues?*

Can appropriation ever be truly collaborative, or is it ultimately just individual appropriations that diffuse through a network?

Is designing for appropriation antithetical to the act of appropriation?

If we are interested in designing for appropriation, *how do we approach preventing potentially negative effects of appropriation?*

How do designers act on appropriations of their tools?
In this case, recent revisions to the App Store have made it so the developers at SCRUFF can incorporate new profile fields that allow users to disclose sexual information (including HIV-status). This design changes ways in which people disclose their status but doesn't empower people to have conversations about stigma in the same way that the appropriation might have. Additionally, I would argue that the inclusion of new designs to address appropriations have created new norms of disclosure that may create bias against those HIV+ users who don't want to publicly disclose their HIV-status.

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