

# What's Mine is Mine: Territoriality in Collaborative Authoring

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## ABSTRACT

Territoriality, the expression of ownership towards an object, can emerge when social actors occupy a shared social space. In the case of Wikipedia, the prevailing cultural norm is one that warns against ownership of one's work. However, we observe the emergence of territoriality in online space with respect to a subset of articles that have been tagged with the *Maintained* template through a qualitative study of 15 editors who have self-designated as Maintainers. Our participants communicated ownership, demarcated boundaries and asserted their control over artifacts for the sake of quality by appropriating existing features of Wikipedia. We then suggest design strategies to support these behaviors in the proper context within collaborative authoring systems more generally.

## Author Keywords

Territoriality, ownership, collaboration, Wikipedia, authorship

## ACM Classification Keywords

H5.3. Group and Organizational Interfaces

## INTRODUCTION

In an online community, issues relating to control and possession can arise when social actors inhabit a shared space. As a result, *territoriality*, the expression of ownership toward an object, is likely to emerge as community members work together to accomplish a common goal [4]. Territoriality serves a communicative function by signaling to other actors in the space that there is an individual or group that has taken ownership of a given territory or object (e.g. "This is my space, not yours.")

These signals can shape interaction within a space through the demarcation of the boundaries between social actors in the environment [4]. The basic expression of territoriality is *marking*, the placement of an object or substance into a space to indicate ownership of one's territory [4].

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Territoriality can also be expressed through *defense*, actions that serve as a response to a perceived invasion of an established territory [4].

These behaviors, if left unchecked, may deter cooperation due to turf wars and conflicts over ownership. Various measures, such as explicit policy and community norms, are employed to prevent the expressions of such behaviors in distributed collaborative communities, particularly those in which an egalitarian model of leadership is prevalent [9]. However, we propose that at least sometimes, appropriate expressions of territoriality will have a beneficial effect on collaborative processes. Without a certain level of proprietary attachment to the community and its activities, individual commitment may wane [10], resulting in lower quality contributions or lower levels of community involvement. Creative collaborative activities, such as writing and animation filmmaking [9], also sometimes benefit from having a primary contributor.

In this paper, we present the results of a qualitative study exploring the expression of territoriality online, using Wikipedia as an example. We describe how a group of lead users express territoriality in this space by appropriating existing functionality to exert control over artifacts. This extends the findings of [4] and [11] by providing one of the first empirical observations of territorial behavior in a real online community. We also examine the tradeoffs that territorial behavior raises in Wikipedia and offer implications for the design of collaborative authoring environments in general.

## Ownership and Coordination in Wikipedia

The control of one's text is an issue that is central to the culture that has been established within Wikipedia. Official policies discourage Wikipedia editors from feelings of ownership toward articles, in terms of the text and the ideas communicated [1], and specifically point out that being a primary contributor is not grounds for asserting possession of an article. Despite this, Wikipedia has created the *Maintained* template (Fig. 1), which allows editors to indicate active contributor status toward a given article. The stated guidelines, and the template itself, are careful to emphasize that article ownership is not expressed by the *Maintained* template (Figure 1). Maintainers are self-designated and ideally should have expertise on the subject matter as well as the structure of the article itself (e.g. style

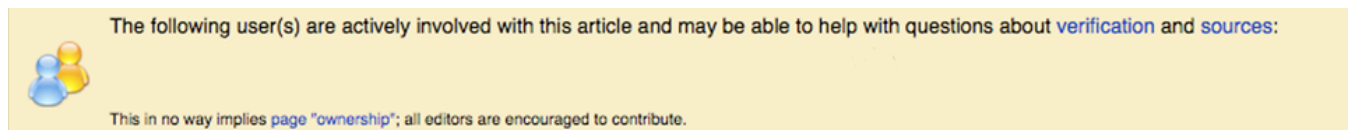


Figure 1. Maintained template. Note that the template explicitly indicates that it is not a marker of ownership

decisions, references) [2]. As of the May 28<sup>th</sup>, 2008 database dump of Wikipedia, there were a total of 1172 articles that were designated as Maintained.

### METHODS AND PARTICIPANTS

We chose to observe Maintainers because, as lead users who have indicated that they have committed substantial time and resources to an article, we believe they might express territorial behavior toward the articles they maintain. We conducted in-depth semi-structured interviews with 15 Maintainers (12 phone, 3-mail) from March through June 2008. The telephone interviews lasted approximately 60 minutes and consisted of open-ended questions regarding their experiences as Wikipedia editors and their activities as Maintainers. The e-mail interviews consisted of similar questions with a period of IM follow-up for clarification and further information.

Participants were recruited via e-mail, messages left via Wikipedia itself, and through snowball sampling. The participants (5 female, 10 male) are all native English speakers and have been active editors for an average of 3.2 years. The interviews were then first coded using a grounded-theory influenced analysis where emergent themes were iteratively refined over several rounds [7]. We then compared these themes to existing research on territoriality as a way to further ground these initial explorations observing this phenomenon in online space.

### RESULTS

Our interviews reveal a management style that relies on the application of territorial markers to communicate one's expertise and commitment to other community members as a way to both deter vandals and to welcome new editors—but only on the maintainer's terms. We observe defensive actions (e.g. monitoring article watch lists for changes and vetting unknown editors) that ensure there is active maintenance that protects article quality. However, we also observe that these defensive behaviors may run the risk of deterring new community member participation.

#### The Maintained template as marker

Broadly, participants used the Maintained template as a signal to communicate their feelings of ownership towards an article in which they contributed to significantly. By indicating that they are the main contacts for anyone who might have questions regarding their respective Maintained articles, the template was employed to communicate their expertise and knowledge of the article's subject matter and its revision history to other members of the Wikipedia community.

The public expression of one's commitment and possessive feelings towards the article suggest that Maintainers do indeed employ this particular template as a marker of territoriality, despite the explicit warnings against ownership found within the template guidelines.

*If you put that template up there and say, "I'm willing to answer questions about this article and put my name up here." It does in a sense say, I'm declaring myself an expert on this article. You know, and I'm going to take over for it. (P3)*

In addition, participants expressed some dismay whenever an unknown or new editor made substantive changes to the article, whether it was regarding content or citation choices, without any discussion on the article talk page.

*I do feel that it [the Maintained template] usually signifies a particular editor as someone who has spent much time and effort on improving or writing a particular article...common courtesy would dictate that person should be contacted or at least notified if major changes are going to be made...(P8)*

We suggest Maintainers perceive the template as an explicit sign to new contributors to a given article that there is someone who acts as its guardian. Maintainers also seemed to carry an expectation that the role of the Maintainer held enough weight that he or she should be consulted if major changes to the article were to be made. At the same time, participants realized that the nature of Wikipedia as a community with a cultural norm discouraging ownership would make that unlikely much of the time. Further, the template is only visible on an article's discussion page, not the page for the actual article itself, making it even less likely that editors would notice (and heed) the template.

#### Defense through monitoring and cross talk

We observed the appropriation of wiki functionality, particularly the ability to easily change pages back to a previous version, for defensive means. All interviewed participants actively monitored their Maintained articles by watching page change updates to look for article vandalism and more substantially, to revert edits that they deem unsatisfactory due to quality issues such as incorrect information or assertions made without proper citations. They then used their perceptions of the quality of the edits to make judgments regarding the quality of the editors, particularly if they are unknown, much like [13]'s observations regarding page watchers who look out for unfamiliar IP addresses or first-time contributors.

*Because people will say "I'm improving the grammar here" but really they have no idea what they're doing. And, there has to be someone vigilantly watching all the time. (P5)*

However, if the changes were minor in nature (e.g. formatting) and left the major structural form intact, participants would be more likely to view the new edits as acceptable and would not revert them.

*Most of what was changed by other people was formatting issues, which don't really matter to me as long as it reads fine. I don't really care what period goes where. (P4)*

A more explicit but less common form of defense, again through appropriation of existing wiki functionality, is through direct contact between editors. This happened both on articles' discussion pages, and through direct user-to-user communication on User Pages, which are analogous to profile pages. Five participants reported incidents where a new editor would repeatedly try to edit an article even though the maintainer would revert their edits after finding them unsatisfactory. In response, participants would then apply a stronger defensive action by objecting through discussion, as opposed to simple reverts of edits. From the perspective of the new editor, however, these territorial responses may prove discouraging enough to deter further contributions.

*And you'll say [via Talk pages], no, you have bad ideas. You should leave the article alone because you don't know what you're talking about...You're protecting the article because you do feel it's yours...But it IS my article. It is my baby. (P3)*

We suggest that the defensive strategies of monitoring and confronting unwanted activity combined with our previous description of marking is indicative of a pattern of collaboration that is more hierarchical than is suggested by the anti-ownership policy [1]. Maintainers exert some managerial power over a selection of pages that they maintain but will allow smaller tasks (e.g. copy edits) to be completed by newer editors.

### **Control through primary contribution**

Consistent with the emergence of public statements of ownership and a hierarchical model of collaboration, we also observed that each of the Maintainers interviewed had a particular editing style, consistent with primary editorship, again despite explicit policies warning against such behavior. To confirm these observations, we used WikiDashboard [12], a visualization of edit activity on Wikipedia pages, and found that the articles maintained by our participants were indeed the primary editors, in terms of number and size of edits.

Each characterized their involvement as that of a managing contributor; that is, he or she decided to improve or significantly revamp the article with minimal assistance

unless he or she specifically requested it from other editors with whom they were familiar. In one case, however, we observed that one participant went so far as to take his activities offline so that he retained complete jurisdiction over his articles as he embarked on major editing.

*I've found that creating the desired article (or major re-write) offline in Word first allows me to take days to weeks to develop, source and write an article.... Once I am satisfied, I either create the new article or replace the existing article completely with the re-written...It is essentially a "fait accompli" style of editing. (P12)*

Generally, participants perceived their editing style to be more holistic in nature, where drafting complete articles is the goal rather than incremental improvements.

*I would rather contribute, you know, finished, more finished product than the smaller bits of information...And, a lot of people just like to contribute a paragraph here, a citation there. (P7)*

As an expression of territoriality, we propose that the Maintainers' editing style is part of a strategy to maintain control of the content and structure of an article and to reinforce to observers that they hold some leadership position in the construction of the article, despite the explicit policies against ownership. From our analysis, we observe that this control is especially apparent in the early stages of the creation of an article, whether it is a substantial rewrite or starting from scratch.

Maintainers may be adopting this editing strategy because they are committed to producing quality articles, particularly ones that will stand up to heavy critique from equally dedicated editors. We suggest that this particular collaborative pattern may also be a result of existing policy with respect to the Featured Article nomination process, which consists of a series of rigorous peer reviews with votes taken until consensus is reached to grant or deny status. The Featured Article designation is a prestigious descriptor of quality; only a small percentage of articles become Featured.<sup>1</sup> Eight of the participants reported that they were heavily involved in the Featured Article process, as both article nominators and peer reviewers.

This leadership model has now been codified within the Feature Article nomination process; nominated articles must have a primary editor who gives his or her blessing for the nomination and takes responsibility for addressing in a timely manner the actionable objections that arise during the peer review process.

*We [the committee] have started demanding that the nominator of the article either be one of the primary contributors...Because we were having a lot of people nominate articles, saying, "Wow, this is cool. I read*

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<sup>1</sup> 2214 of the 2,539,000 articles, as of August 2008 [3].

*this and it's awesome." But they have no concept of whether the article is complete... (P5)*

This model of primary ownership, with the territorial expressions that accompany it, can have benefits. Since the Featured Article process is a lengthy and rigorous one, a successful nomination may more likely occur if there is a primary contributor willing to expend a large amount of time and resources needed to usher an article through peer review. Having a primary contributor who is intimately familiar with the history of an article may also have value in explaining why an article is the way it is, to help newcomers understand the article's structure or to resolve disputes.

### IMPLICATIONS

Our data revealed that territoriality does emerge within online space—and that when a hierarchical style of collaboration is crucial to success, territorial behavior may be valuable. However, it can also have a negative effect by deterring new member participation. Instead of negotiating with a Maintainer who reverts their contributions, new editors of an article might just give up on the article, or the community as a whole. To maintain the health of a collaborative social system, encouraging a diverse pool of participants to help maintain documents may help slow the decay of artifact quality. We found that Maintainers were amenable to small formatting changes made by other editors. Collaborative authoring system might support this kind of collaboration with an expertise locator that allows lead contributors to more easily choose collaborators with desired skills, especially ones that do this kind of minor work. This type of system may also have an educational benefit by helping newer members who are learn community norms through incremental participation [5].

Retaining the expertise of longtime community members, however, is also essential to the survival of a collaborative authoring environment. Building upon [6], we propose that visible markers can be intelligently routed to users who display a pattern of leadership behaviors consistent with those we observed in our interviews. The outward expression of ownership may encourage community attachment and member retention so that longtime contributors have a more systematically recognized outlet to demonstrate commitment to other participants. However, these markers should not encourage excessive in-group and out-group identity such that newer community members are deterred from participation.

We also note that the expression of ownership may be less productive in certain contexts as well, such as edit wars which may adversely affect the quality of the information found within an authoring environment [13]. However, we observe that territoriality can be a valuable component to the collaborative process in an appropriate context,

particularly when during labor-intensive periods of work, such as initial document creation [8]. As a result, careful encouragement of marking, control and defense behaviors, along with tools that support these behaviors when appropriate, may lead to more productive user experiences within collaborative systems, when balanced with measures that allow for full community participation.

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