

Helping People Find Support Through Data: Reflections from Four Projects on Sharing Personal Informatics Data Online

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INTRODUCTION

During my Ph.D. work, I conducted a series of projects examining how to best design features to help people receive support from others online when they share data they collected from personal informatics tools. Each project offers recommendations specific to the data domain, data modality, and target audience. In this submission, I briefly revisit these projects through a wider lens to reflect on how tracked data could or should be shared.

THE FOUR PROJECTS

The four projects each examined an approach to sharing tracked data with others online, either an already used in a commercially-available app or a novel approach to overcome a known challenge in sharing. I briefly review the four projects and their implications for the sharing of personal informatics data.

What Makes Self-Tracking Post Content Interesting?

To understand what content about tracked data people find interesting, we collected real tweets made with the RunKeeper app hashtag and showed potential audience members generated tweets with similar characteristics [3]. Tweets contain a default description (“Just completed a X.XX mi run. Check it out!”) which people can edit or supplement with pictures from their run.



Figure 1. A generated tweet explaining the importance of a run. Participants found this style of tweet more interesting.

Both sets of tweets received more interest and response when they explained the importance of a run and when they included a picture from the run. But in practice, only 26% of real tweets included any custom descriptions or pictures, and many of the custom descriptions were perfunctory (e.g., reiterating the pace or distance, describing the weather).

Scaffolding Authoring More Interesting Content

We developed a structured authoring tool, Yarn, to help people explain their tracked data in ways that others find interesting [4]. Yarn prompts people to consider what is important about the moments they track and offers visual templates which align with many of the reasons why people want to share their tracked data.

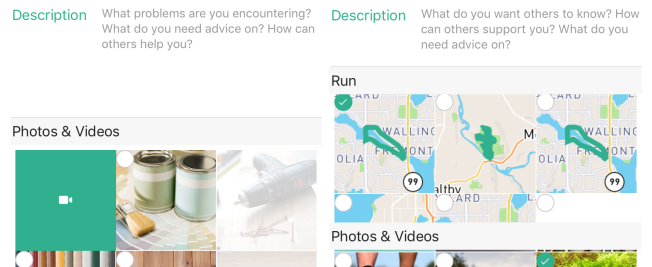


Figure 2. The authoring process in Yarn encourages people to describe what makes the data they collected important and to include more compelling visual content.

Participants found the authoring process encouraged them to create more appealing visual content and facilitated discussion with friends and family. However, the evaluation also surfaced a design tension between facilitating an easy authoring process and creating personal moments rather than system-generated ones.

Facilitating an Interested Audience

We explored how a system can foster a community interested in seeing each other’s tracked data by creating cohorts of people with similar tracking goals and interests. We designed an app, Food4Thought, for sharing photos of food which complete daily challenges to a private Facebook group [2].



Figure 3. Food4Thought provided participants interesting daily challenges to foster conversation around food.

The shared tracking context led participants to learn from each other about what nutrients were in their food and develop ideas for changing their habits. Seeing other’s participation in the community also encouraged participants to continue to track.

Examining Fine-Grained Sharing

We took a value-sensitive approach to understanding the tensions at play when physical activity data is shared in fine detail (e.g., 5 or 15-minute intervals versus daily totals). After surfacing a

tension between desires for privacy, transparency, and accountability, we developed a set of data transformations as probes to examine how people want to balance these values [1].

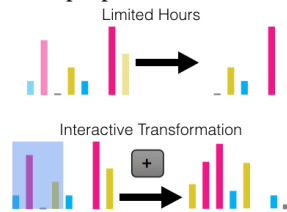


Figure 4. Two transformations of physical activity data: showing a subset of the day and shifting when steps occurred.

Although participants thought transforming or reducing the data they shared could help them preserve their privacy, they felt that they could get enough benefit from sharing coarser aggregations of their activity, such as daily totals.

REFLECTIONS

These projects led to some overall thoughts on how to approach the design of social features in personal tracking apps. These suggestions are not universal, but apply to many of the data domains and sharing scenarios that I have encountered.

It is crucial to align shared content to the audience

Audiences for personal informatics data vary wildly, from weak ties on social networking sites to people who collect the same data about themselves. These groups differ in what content they want to see. Close ties and people with similar interests often appreciate seeing intermediate progress, whereas broader social networks tend to prefer only seeing the major milestones. Understanding how the target audience(s) want to engage with a particular kind of data is a critical first step toward developing sharing experiences which are positive for both the sharer and the audience.

Today, applications often default to creating social features private to the platform where the data is being collected, such as the Strava network of runners and bikers. Though the shared interest in the collected data helps ensure an interested audience, the platform lock-in makes it more challenging for people to reach close ties who would be interested in seeing what a person is doing or have more serendipitous connections with weaker ties.

I see promise in hybrid approaches where apps encourage sharing major achievements on broad social networking sites, leaving everyday updates to audiences on the tracking platform. I am also excited for more designs to leverage Snapchat’s messaging style, where person can choose who among their connections is interested in the content. Grouping strangers together who have a shared tracking goal can also help facilitate an interested audience.

Descriptions and visuals should usually augment numbers

For better or for worse, personal informatics data often gets distilled to numbers, like how far a person ran or their heart rate during a certain period. Though these numbers may be personally meaningful, others typically lack the context which explains their importance. Together with description which surfaces *why* those numbers demonstrate a personal victory or struggle, an audience member can begin to offer support.

Visuals like pictures, videos, or maps can further help an audience member understand and experience the moment that the sharer tracked. Descriptions and visuals are most beneficial when they go beyond painting a picture, surfacing why a moment was special or momentous enough to warrant sharing.

There are certainly circumstances where the importance of a shared number is self-evident. But these circumstances usually require that the audience has domain knowledge already (e.g., knowing that 13.1 miles is a common goal distance for runners) or has knowledge of the person’s experience (e.g., knowing that someone achieved their goal weight).

Not every tracked moment warrants sharing

People often respond to social features in personal informatics with concerns about boring their audiences and oversharing [5-7]. I think designs can better help people better identify whether a moment is worth sharing. For example, designs can help people identify whether sharing a moment would help support a common sharing goal like accountability or advice. Designs can also compare a moment against a person’s previous tracked data to determine whether that moment represents an accomplishment.

Tracking intermediate moments helps a person monitor their progress and stay motivated. But those intermediate moments can often feel repetitive to audiences unless they pose an opportunity to provide advice or support. Automatically sharing all tracked moments often interferes with people’s overall sharing goals and can violate privacy if personal information is accidentally revealed. Though sharing them may drive audience engagement in the short term, they can undermine a person’s ability to get responses later on when they need it more.

THE BIGGER PICTURE

I believe that the field has the opportunity to think more about how tracked data can be used to *supplement* how people communicate online, rather than *being* what people communicate. Tracked data can provide context, evidence, and explanation to other moments people share on social media. Describing this importance with tracked data can result in people finding more support, advice, and accountability toward their goals online.

Though I have completed the individual projects described here, I am still formulating broader design implications for personal informatics data sharing features. The workshop poses a unique opportunity for experts in the field to develop a shared vision. I would be thrilled to share my perspective and learn what visions others have arrived at from their work on the topic.

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