# The Weight of Things Lost: Self-knowledge and Personal Informatics

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## Abstract

As a technologist and designer, I'm interested in the overlap between personal informatics and modern subjectivity: in the stories we tell through, and because of, our devices-as-companions. Personal informatics allows us to understand information about ourselves but the path is not always a straightforward one where more knowledge leads to more insight. The process of acquiring that knowledge, and the personal transformations that come along with it, often combine to yield surprising insights. I performed a year-long auto-ethnographic project of weight-loss and self-transformation through personal informatics and I use that experience here to make two arguments: for more embodied and autoethnographic evaluations, and for expanding both design and evaluation criteria to include the rich and contradictory relationships with ourselves and our world that the use of personal informatics can generate.

## Author Keywords

methodology, evaluation, autoethnography, design

## ACM Classification Keywords

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

## Introduction and Background

One year and 617,496 calories ago, I decided that I needed to get back in touch with my self and back in control of my body. A weight gain forced me to reevaluate my lifestyle and I found reason to face, fix, and fine-tune its essential parameters. Like any well-meaning, well-connected person of my age, means, and technological background, I chose the Internet and a smartphone to help me do so. And so, at the beginning of 2012, I strapped myself into a group of a diet and exercise-tracking smart-phone applications and set forth to optimize and manage my "self." Over the year, I've coupled this personal device data with ethnographic field-notes, body scans, physical examinations and blood tests, and consultations with trainers, fellow dieters and physicians.

I had academic goals as well. While I wanted to correct an imbalance in my life, I recognized that this crisis had provided me with an opportunity to better understand solutions that I may have been critical of professionally [4] or avoided personally. By connecting my investigation with a real personal need, I considered this as a chance to develop an experiential understanding of both personal informatics and the forms of modern subjectivity being expressed through them. I wanted to understand a community and a relationship with technology that had been something of a mystery to me: those who choose to track and optimize their inner and outer lives by incorporating a set of strategies and tools that I had so far strenuously avoided.

My autoethnographic approach draws on aesthetic principles and techniques [1, 3, 6] to achieve that goal. As a method for both understanding others and the self, I believe approaches like these can help us to deeply describe and engage with the moral, political, emotional and ineffable experiences that eventually accompany the use of personal informatics, and I think evaluation and design approaches that emerge from personal and professional reasons represent that complexity of motivations, desires, and fears well. Further, linking methods for understanding that tangle into the development process is increasingly important as we attempt to sustain a discourse on devices and systems that are ever more integrated into our everyday lives.

## What I experienced: re-understanding self

It took only a few months of tracking before I began to read non-weight-related features of my life through what [2] refers to as the "prism of weight loss." My days were reshaped through that viewpoint and I found new units of measure: new ways of marking my time and my self. My tools have been my oracles, and I consult them before planning meals or an evening out.

At the same time, I view the insight these tools provide me, and my developing dependence on them, as somewhat terrifying. I do not enjoy contemplating my self as blood and sinews and electrical signals, but the efficacy of the approach is impossible to deny. I might have preferred to accomplish my self transformation within broader measures, and I still long for that; to comprehend my body in longer and broader scales: seasons instead of hours, some other, coarser, property than calories. So why continue a program that contradicts my ideals?

For one, because it worked and worked quickly. After 4 weeks I had lost 5.6 lbs, and I felt as if I had a better understanding of how my body functioned. This is a tribute to personal informatics. But I worry about its mesmerizing effect over me: the power of the numbers.

Intellectually, while I might not believe in the value of calories as the sole or even dominant basis for weight management, and though I might try to focus more on the ratios of nutrients or on the quality of my food, the calorie budget readout in Lose It!, with its scary red zone indication, remains a metaphysical hurdle too difficult to clear.

This was a surprising revelation. I know well the debates on calories and on the models used by these apps. I knew that, by describing our bodies as precise systems that can go out of sync based on small discrepancies, the health industry benefits by positioning their tools and systems as indispensable and necessary guides in our lives. Yet, as my experience continued, I felt a strong sense of fidelity to the app and my system; an ordained from Logos desire to keep the record true. And while I continued to ask myself, "can our bodies really optimize down to a few calories?" I still measured out exactly 7 evenly-sized almonds for a quick snack.

Over the months I steadily made my life more calculable by streamlining my diet to in turn streamline how I input data into my tools. I prioritized certain foods and recipes, and avoided others to work best within the capabilities of the food database. Yet, I found freedom in this calculation and control, and room in its reduction. We (The Apps and I) had co-constructed a digital model of my self, and here I was, managing myself, it seems, by proxy. The feedback from that digital model often took precedence over how I physically felt. When I didn't eat "enough" protein I felt weaker, and when I had too much sugar I felt fatter. These were delayed reactions; a re-reading of my body from the model. I've yet to decide: is this model pushing me closer in contact or further away from my self and my world?

What I think this shows is the surprising ways personal informatics reveal contradictions and resist a straight-forward reading of self-knowledge. As system designers, how should we talk about the networks of power and contradiction enjoined by the systems we evaluate and design? I've listed a few of the implications from what I've learned that I feel are most important in that regard.

## What I learned
*Other ways to evaluate*
A concern frequently raised about embodied or autoethnographic evaluative approaches is whether they turn into a navel-gazing exercise, where we take our particular individual perspectives, concerns, and experiences as necessarily central to HCI's work. But I believe that we can use personal experience, not as an unquestionable and direct critique of technology, but as a starting point for critical discussions which connect our experiences to that of others and to wider cultural debates. In this sense, focusing on personal, experiential knowledge is not a retreat from focusing on others, but rather a starting point from which to develop empathy for their experiences, to understand their implications for our joint life spheres, and to form a base from which we can communicate in a register that resonates more universally.

*Personal informatics as modern subjectivity*
Finally, we should also incorporate into our work the shifting political meaning and importance of health and the body, and how the rise of privatization in the management and provision of health care has increased our obligations to manage and monitor our own health while decreasing organizational responsibility [5]. Yes, our new models should embrace a holistic notion of well-being that includes happiness, beauty, sexuality and more, but we should also incorporate and question how our

personhood and our work is increasingly being defined not just by ourselves, but by a complex of others; a complex that includes our immediate community and the application-creators, entrepreneurs, and new media companies that are building on our desire to optimize our selves. The ways in which we perceive and contest our possibilities and limits are being reshaped through these collective decisions. We should be encouraged to consider where our algorithms and applications fit into this developing understanding of our selves.

*Embracing the contradictions*
What my experience demonstrated to me is that our mechanisms for mastering and knowing/caring for ourselves are often at odds with each other and that this tension can be explored in productive ways. By allowing insight into our bodily processes, personal informatics increase our capacities and abilities: to critically assess "correct" functionality, and to help us regulate our processes or our models of them. At the same time though, they encourage our participation in networks of power that constrain us and might decrease our will or ability to exercise our capacities in the future[2]. Losing weight by controlling diet and exercise via systems like the ones I evaluated requires from us an adaptability to newly revealed units of measure, and an ability to re-construct our bodies as obedient and submissive through attention to small details. And though we admit ourselves into off-the-rack panopticons to do so, through this control and restriction, we can become aware of exactly what we consume and its effects, and come to realize the positive embodied effects that can accompany changing patterns in our lives [2]. That these networks of power are internal (between us and our selves) and external (between us and the world) is what requires a rich variety of evaluative approaches.

## Conclusion
I wanted to understand how it felt to be healthy and fit, but I came to wonder about the changes in self that accompanied my technologically guided, deliberate experience: does the quest for more information about ourselves and our world help us find either? How might our newfound measurement and tracking abilities form the basis and expression of a modern connected person, for better or for worse? Furthermore, where does the approach I've used—experiments and experiences within one's self—fit within our toolkit? How might both factor in as we evaluate and design personal informatics? How do we engage with all these contradictions productively while remaining open to all the increasing avenues of development that personal informatics can provide us?

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