

## THE CONCRETE PATH TO GLOBAL LIFE SATISFACTION

Lately I have been playing some Starcraft II and I cannot beat VH-60 AI so often. I have won some games but quite often I lose. This is not something so bad. Some weeks ago, I could not even beat Hard. Practice improved my game. I like the lesson that I learned and in the spirit of practice, I want to go over some of the concrete steps I am taking towards Global Life Satisfaction.

Now Global Life Satisfaction is a great goal and I cannot do it if ECB does not come through with \$500 million, and as far as I know Madam Christine Lagarde, the President of ECB is positive that ECB will give me the money despite Bill Gates' strong negative stance. I have asked ECB to give me a job offer with Managing Director title and give me control of an account.

Here I want to just talk a bit about the most basic tool for Global Life Satisfaction, which is Survey questionnaires. One of the major tools of Scientific Psychology is the Survey and processing of the Survey Answers. This project is to ensure a strong solid ability to deliver a survey and record the answers in a MongoDB database in a clear solid manner.

Taking a step back, let us consider the model of the world we have and how this Survey response will be used in the future. We could consider human individuals to be represented as an abstraction characterised by  $K$  documents  $D_1, \dots, D_K$ . We would like these documents to be managed. These documents we assume are results of Survey filling by individuals. Let all human beings be represented by  $\mathcal{H}$  with cardinality  $N_h$ . Quite generally Global Life Satisfaction and many other sorts of Scientific Psychology efforts can be thought of as the process of recording  $D_k(h_q)$  of documents say in a central database associated to them, statistical analyses of this corpus of data, formulation of quantitative models of psychological phenomena, and then based on these analyses providing *services* to the individuals.

We will be looking at one of the crucial steps in this general framework. We will be considering data collection from an individual. This is web/mobile based Survey and recording of Survey results in a centralised database.

Now Quantitative Positive Psychology genuinely begins only when there is a great deal of data in the database. We suppose for simplicity that Survey questions are in data structures  $S_1, \dots, S_K$ . Our scheme is therefore for individual  $h$  to administer Survey  $S_k$  whose response is  $D_k(h)$  and store it in the database. Then statistical models can be tested with  $\{D_k(h) : h \in \mathcal{H}\}$ .

The purpose of the technology parts of our projects is to ensure that we have the I/O to administer  $S_k$  over web or mobile remotely to arbitrary individuals across the globe and entice them to fill in  $D_k(h)$ .

In this abstract formulation, Global Life Satisfaction would be the response to individual  $h$  of material  $I(h, D_1, \dots, D_K)$  that are valuable for the individual to improve their Life Satisfaction. In other words, the Global Life Satisfaction project has as goal choice of determining  $I(h, D_1, \dots, D_K)$  that have a strong probability of improving Life Satisfaction for arbitrary individual  $h$ . We do not go into the

exact content of  $I(h, D_1, \dots, D_K)$  here which are to be determined in the future. The goal of GLS can be considered to have made significant progress when Life Satisfaction of some significant part of  $\mathcal{H}$  improves as a result of our efforts.

### 1. THE COMMERCIAL VIEWPOINT

I want to point out that our abstract viewpoint elides the problem that it is only possible for  $h$  to respond to  $S_k$  and produce  $D_k(h)$  when  $h$  has something to gain in doing so. We assume that improvement of Life Satisfaction is a universal demand, and therefore that when our  $I(h, D_1, \dots, D_K)$  provides positive benefit then  $h$  is motivated to actually fill in  $S_k$  and follow the instructions in  $I(h, D_1, \dots, D_K)$  and, we hope, see improvement in their lives.

We will totally ignore the substantial issue of the contents of  $I(h, D_1, \dots, D_K)$  here, which is the real core of Global Life Satisfaction, and focus on our technical solution of how to make web software administer  $S_k$  to individual  $h$ .

Thus our test case is to take a specific Survey questionnaire  $S_1^0$  and show how this can be filled up with code with Meteor. Here the code should be decoupled from the particular questionnaire so that it can apply for all  $S_1, \dots, S_K$ . Note that  $K$  is arbitrary, and it is unwise to assume that it cannot grow over time as well.

We wanted to take advantage of special features of Meteor and Blaze Templating to accomplish this task with the database being MongoDB. In production, the MongoDB will point to a cloud database that is remote. In production, the web apps will be served from a cluster of more than a thousand hardware servers running Mesos.

We will see a working test code that administers a survey and saves the answers in the database. Meteor is a production quality software for app development that has great new techniques for synchronising UI elements to data in the MongoDB. Our goal thus is to write *Survey-independent* code and ensure that the filled form is inserted into the database. We will leave fancier versions of the test to the future.

Now software that is comfortable and usable for billions of people have all manner of sophisticated concerns that we will ignore for the moment. From our point of view, barebones code that administers  $S_1^0$  Survey and saves the result to the database can be used without modifications for all Surveys  $S_1, \dots, S_K$ . To make things clear and simple, we could simply have code where different web pages serve different Surveys.

We want to produce these clean barebones prototypes to understand canonical software engineering for components of our project.