

人工物発達学における Contextual Inquiry の利用

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Contextual Inquiry as a Method for the ADA

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Abstract - Contextual Inquiry は、主にユーザビリティ工学の分野で開発されたユーザ調査の手法である。本稿では、それを人工物発達学の調査に適用した場合、どのような手順で実施するかを整理して説明する。それにより、目的志向的な人工物発達学における調査手法と従来の文化人類学のフィールドワーク手法との相違点を明らかにした。

Keywords : Artifact Development Approach, contextual inquiry, usability engineering, field work

1. はじめに

人工物発達学では実地調査を重視する。それは生活者のなかで目標がどのように設定されており、そのための達成手段がどのような形に構成されているかについて、まずは現状把握をきちんと行う必要があるからである。

実地調査のやり方には、文化人類学で用いられているフィールド調査のような方法もあるが、人工物発達学の母体となったユーザ工学では、機器やシステムの開発期間が限られていることから、十分でない時間でもそれなりの成果を上げるための手法が開発されている。今回取り上げる contextual inquiry (文脈における質問法、文脈調査法などの訳語がある)もその一つで、半年や一年を要するフィールド調査とは異なり、一週間程度の調査でユーザの実態把握を行うものである。

本稿では、特に外国(ここでは英語圏)において、どのように contextual inquiry を実施するかを、本年1月に実施した事例をベースとして紹介する。筆者はこれまでも contextual inquiry を利用してきたが、今回のアメリカ調査では、アメリカのユーザビリティ専門家の中でもトップクラスの Dr. Susan Dray に協力を依頼することにした。Dr. Dray は長年の友人でもあるが、ACM SIGCHI や UPA などの学会で講習会を担当したり、User Friendly などの学会で基調講演を依頼されたりするアメリカにおけるキーパーソンの一人である。専門はユーザ調査を中心としたユーザビリティ全般であり、Dray & Associates というコンサルティング会社の社長でもある。Contextual inquiry そのものは、Karen Holtzblatt [1]によって開発され

たものだが、Dr. Dray はそれを自家薬籠中のものとして利用しており、「本場」アメリカにおける利用実態を知るにも良い機会だと考えたものである。

以下、contextual inquiry の利用手順について、1. 事前準備と 2. 調査の実施のフェーズに分けて詳述する。

2. 事前準備

2.1. 人工物発達学についての事前打ち合わせ

人工物発達学の考え方は、まだ広く知られているものではないため、焦点課題を明確化する以前に、調査に協力してもらう Dr. Dray にその考え方のポイントを理解してもらう必要があった。実際の調査では、米国における contextual inquiry のやり方を知る意味でも、Dr. Dray にメインインタビューを担当してもらい、筆者はサブインタビューの位置づけで参加することとした。

こうした役割分担の仕方を取ったのは、アメリカという文化圏におけるラポールの取り方や本題への入り方、ラップアップのタイミングなどを知るためでもあった。どこまでどのようなやり方でインフォーマント(情報提供者)の世界に入り込むかは、文化による相違が考えられる。その意味では、異なる文化圏において、どのようなやり方をすべきかを知る必要があった。異なる文化圏においては、予想外の行動により、インフォーマントに対して侵襲的になってしまい、彼らに不快感を抱かせてしまう可能性があったためである。

そのような目的から、前年の8月に事前調査をかねてアメリカの Minneapolis にわたり、そこで Dr. Dray と綿密な打ち合わせを行った。その打ち合わせを半年以上前に実施する必要はもろくなかった。ただ、当初は10月に本調査を実施する予定であったのが、先方の都合で1月に実施することになったという事情があった。そのため11月に実施した石垣市における国内調査が先行することとなり、結果的にはそれが調査の手順と内容をブラッシュ

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アップすることにつながった。

ともかく、2008年8月における事前打ち合わせによって、Dr. Drayに人工物発達学の考え方や取り組み方、特に、なぜ目標達成のために特定の人工物を選択し利用しているのかという問いと、なぜそれ以外の選択肢を選択し利用することがなかったのかという問いを行うのが重要である、という点を理解してもらうことができた。さらに、彼女の質問に答えることにより人工物発達学そのもののポイントを明確化することにもなった。

なお、事前打ち合わせを行ったのは2008年8月であったが、外国のコンサルタントに協力を得るのであれば、当初予定していたように、2ヶ月間程度の余裕をみて本調査に入る必要はあった。先方のスケジュールの問題もあるし、インフォーマントのリクルーティングにも時間が必要だからである。

2.2 調査地点の決定

日本での調査は2007年度と同様、千葉市(もしくは横浜市)と石垣市にした。個別のインフォーマントが異なっても地域の特徴が共通である方が、結果の解釈に都合が良いと考えたからである。

アメリカでの調査はDray & Associatesの所在地であるMinneapolisとした。他の都市でインフォーマントを探すことも可能ではあったが、費用を抑えるためと、特にどこでなければならないという必要は無かったため、今回はインフォーマントの得やすさという点からMinneapolisにしたものである。

2.3 焦点課題の明確化

今年度は、「調べる」ことを共通テーマとして調査を行うことにしていた。また昨年度の共通テーマであった「伝える」ことについても調べることにした。そこで、それに関する調査項目の整備をまず行った。前年度の経験にもとづき、人工物の選択と利用に関しては、生活者の価値観が関係しているであろうと予想されたため、今年度の調査では、「調べる」ことに関する人工物の利用実態を把握すると同時に、彼らの価値観を調べる必要があった。

2.4 質問項目の用意

Contextual inquiryは、インフォーマントの生活現場に赴いてインタビューを行う手法であり、そのために通常はリサーチクエストを用意しておく。いわば半構造化インタビューを現場で行う形になる。しかし、今回は調査したい内容が多かったため、単なるリサーチクエストではなく、それらを詳細化し、質問紙票の形に用意した。これは石垣でもミネアポリスでも同じである。

まず、石垣市での調査を行うための質問項目を用意した。それは以下のものから構成されている。この編成は、主に橋爪が担当した。内容は以下のとおりである。

- (1) 「調べる」ことに関する人工物発達学調査
 - a. 手段一覧表(保有調査票)
 - b. 手段利用頻度調査票
 - c. 手段利用場面調査票
- (2) 人工物選択に関する価値態度調査
 - a. 利用手段の重視点調査票
 - b. 価値態度質問紙尺度
 - c. QOL 質問紙尺度

なお、(1)-a,b,cは一枚の調査票にまとめてある。(2)-b,cは石垣調査では用紙を見せながら聞き取り調査を行った。そのため石垣調査では2時間の調査を2回実施した。しかし米国調査では時間が限られていたため、(2)-b,cは質問紙調査票として事前にインフォーマントに送付し、その回答をベースにしたcontextual inquiryを2時間実施した。

(1)-aは表1のようなもので、紙メディア、電子メディア、対人的手段から構成されている。

(1)-bは、(1)-aの手段を毎日、週に2,3回、月に2,3回、年に数回、ごくたまに、使わない、といったカテゴリーで回答してもらうものである。

(1)-cは表2のようなもので、情報を調べる場面として7つ、コミュニケーションを取る場面として6つを設定している。それぞれの場面で(1)-aの手段のうち、どれを利用するか、またそれは何故か、何故他の手段を利用しないのか、を問うものである。

表 1 手段一覧表

No.	Means to Use			
1	Paper-based Media	Books	Dictionary, Encyclopedia	
2			Technical Book (e.g. Law, Cooking, Medical)	
3			Map, Time-table	
4			Product Manual, Product Guide	
5		Periodicals		Newspaper
6				Journal
7				Free Paper
8		Snail Mail		Letter, Postcard
9				Telegram
10	Electronic Media	Broadcasting	TV	
11				Radio
12		Personal Computer (PC)		Website Access
13				e-Mail
14				Chat
15				Application Software
16				Other Function
17		Personal Digital Assistance (PDA)		Website Access
18				Other Function
19		Cellphone		Website Access
20				e-Mail
21				Texting
22				Call
23				Other Function
24			Landline	
25			Fax	
26		Other means		Electronic Dictionary
27				Other Device
28		Ask to Somebody		Your Family Member
29				Your Friend
30				Your Colleague
31				Your Neighbor
32				Professional (e.g. Teacher, Clerk)
33				User Support Personnel
34				Somebody else
35			Use Other means	
36			Do nothing	

ものを利用する予定であったが、結局入手ができなかったため、同様の考え方にもとづいて日本で作成された価値志向性尺度 [5,6]を英訳して利用することにした。なお、英訳にあたっては、国内の翻訳業者に委託したものを、さらに Dr. Dray にチェックしてもらい、アメリカ人として自然に読めるものにするように配慮した。

また(2)-c の QOL 尺度としては、WHO が作成したスケール [13,14]が見つかったので、それに古屋の生活満足度尺度[11]を追加して利用した。

これらの尺度については、QOL 尺度の Part 7, No. 35 のように、侵襲性のある項目も含まれており、Dr. Dray からは削除を勧められたが、WHO が作成した尺度であるということでそのまま利用した。ただし、記入にあたっては、項目によって回答を拒否できる旨、教示を与えるこ

(2)-b の価値態度質問紙としては、当初は Spranger [2] の6つの価値観を質問紙項目とした Allport-Vernon [3]の

ととした。

なお、これらの質問紙の英語版は付録として添付してある。

表 2 手段を利用する場面

Situation A: Information Search

A1	When you are having trouble finding a destination.
A2	When you want to know tomorrow's weather.
A3	When you are at a loss how to operate a device.
A4	When you want to know the starting time of the theater.
A5	When you can't remember the spelling of a word while you are writing a document.
A6	When you want to know how much income tax to pay.
A7	When you really want to know about the person "Mr. X" whose name appears frequently on the media.

Situation B: Communication

B1	When you want to tell your family member that you'll be late getting back home.
B2	When you want to discuss about the date and venue of a meeting.
B3	When you want to talk to someone or hear his/her voice.
B4	When you want to talk to someone about the change of meeting schedule.
B5	When you realize that you'll be late for a meeting.
B6	When you want to express your gratitude for a gift.

表 3 利用手段の重視点

Situation A: Information Search

a	Ease of Use	Less workload to get information
b	Efficiency	Less time to get information
c	Cost	Less cost to get information
d	Ease of Operation	Easy operation to get information
e	Correctness	Obtained information to be correct
f	Ease of Understanding	Obtained information to be easy to understand
g	Other	(Please Specify)

Situation B: Communication

a	Ease of Use	Less workload to convey information
b	Efficiency	Less time to convey information
c	Cost	Less cost to convey information
d	Ease of Operation	Easy operation to convey information
e	Correctness	Conveyed information to be correct
f	Sureness	Conveyed information surely reach the person
g	Politeness	No impoliteness when conveying information
h	Other	(Please Specify)

2.5 同意書の用意

て書いてある。二部作成しておき、インフォーマントが署名してから、一部はインフォーマントに渡し、もう一部をこちらで保存する。

2.6 調査プロトコルの用意

これも Dray & Associates 側で用意してくれたが、実際の調査の手順を事前に確認しておくためのものである。調査に協力してくれるコンサルタントに、ここまでのものを作成してもらうためには、やはり事前の十分な打合わせが大切である。

ただし、実際の時間配分は、予定どおりには行かず、最初の約 20-30 分はラポール形成のためのイントロダクションに費やされ、2 時間の予定がたいていの場合 2 時間少々、最長では 3 時間になった。

Protocol

Entry (5 min)

- Entry, high level introductions, Informed consent, set up, collect questionnaire

Introduction to study (5 min)

- Anything they didn't understand in the questionnaire
- Check to see how they answered #71 → "Never"?

Background on the person (30 min)

- Life history – main events in their life
- From MN?
 - If so, still friends with friends from elementary (etc) school?
 - If not, still friends with people from where they came from?
- Occupation
- How spend a typical day?
 - Week day
 - Week end day
- What kind of social activities are you involved in?

Values (about 25 min)

- Show Spranger sheet of Value Dimensions: Which description best describes you? Attitudes towards SOCIAL RELATIONSHIPS (life)
 - What parts are most applicable?
 - What parts don't fit so well? (if any)
- Ask: NOW, attitude about THINGS ("Utilitarian" and "Aesthetic") (not people), does that change anything?
- Give a story or example that shows us how you fit the category
- Now, (give them the profile sheet): How much would you say each of these describes you? Attitude towards people first, than things
- Do you have different attitudes towards different kinds of things (esp. electronic things)? (esp.: TV – is it furniture? PC – a tool? Cell phone? Car? (why chose) Impacts of aesthetics, cost, etc on these things.
- ALSO if time: ask about ordinary things – furniture (sofa), wine glass (expensive or plain)

Information-seeking and communication (about 50 min)

Explain different means of getting information from sheet (everything until PC, then PC, PDA, Cell phone, and then to lower level again)

For each ask:

- Do you have this?
- When did you get it?
- Which aspects were most important to you when you bought it?
 - Performance
 - Functionality
 - Weight and size
 - Manufacturer or brand
 - Because it was intended for people like you
 - Design (looks good)
 - Ease of operation (how did they know that?)
 - Price
 - Other (describe)
- How often do you use it?
 - Almost every day or more
 - 3 – 5 times per week
 - Once a week
 - 2 – 3 times a month
 - Several times a year
 - Never
- Scenarios: 6 for Information seeking/6 for communication
 - Ask which one they would use?
 - Under what circumstances
 - Then ask why (turn over sheet)
 - IF answer with electronic means: How did you do it before you had this?

Wrap up

We've talked a lot about technology-related things. But obviously, technology is only part of what's important in life. What other things are important to you? For the thing that is most important:

- When did you get it?
- Which aspects were most important to you when you bought it?
 - Performance
 - Functionality
 - Weight and size
 - Manufacturer or brand
 - Because it was intended for people like you
 - Design (looks good)
 - Ease of operation (how did they know that?)
 - Price
 - Other (describe)

2.7 費用

この調査に要した費用は全体で 10,080 ドルである。インタビューを実施したりする際のコストは時間単価で

185 ドルと計算されている。今回は、知り合いということで 8 割程度のディスカウントをしてきていたとのことなので、通常であれば、時間あたり 200 ドル位なのか

と思われる。

2.7 リクルーティング

インフォーマントのリクルーティングは、外国人である我々にはどうしようもない部分であり、現地のリクルーティング企業、もしくは今回のように現地のコンサルタントに協力を得る必要がある。

実際にインフォーマントに渡される謝礼は、今回は100ドルであり、リクルーティング費用全体は、それを含めて200ドルだったが、国内調査での相場を考えるとそれほど高額ではない。

今回の調査では、6名のインフォーマントを依頼した。内訳は、20代の男女各一名、60代と70代の男女各一名の合計6名である。

Jan. 26
Hi XXXX,

Thank you very much for participating in this research. I am writing with more information about what we'll be doing and to confirm your address and the time/date of our appointment.

About this research and what to expect

リクルートにあたっては、以下のようなメールが Dr. Dray からインフォーマントに宛てて事前に送られた。この中で、調査の目的や概要、実際の手順、依頼事項、謝礼金額、日時と場所の確認などが行われている。調査用紙については別途普通郵便で送付もされたが、基本的にインフォーマントとのやりとりはメールを使ってなされた。今回のインフォーマントは中流階層の人々であり、調査の目的からインターネットを利用していることを条件としていたからである。

This work is being conducted for Professor Masaaki Kurosu and graduate student, Ms Ayako Hashizume. They will be arriving in the Twin Cities on Tuesday, January 27.

This research is about how people's values relate to how they search for information. There are two parts, the questionnaire and the interviews with you at your house. They have done a similar study in Japan and will be using translated versions of the questionnaire and interviews. I will be the interviewer, but Professor Kurosu, who is fluent in English, may also ask some questions. Ms. Hashizume, who understands English very well, will probably mostly listen.

When we arrive at your home, we will ask you to sign an informed consent form. The most important part of this is the part that assures YOU that everything you tell us will be completely confidential. This includes the questionnaire (more on that in a moment) and the visit. We would also like your permission to take photos and possibly to video tape parts of the visit for research purposes ONLY.

The "homework" is the attached questionnaire. (I will also send you a paper copy by snail mail) Please answer these questions before we arrive. It looks long, but it should only take you about 15 minutes max to fill out. As with everything else, I can assure you that your answers will be strictly confidential – but if there are ANY questions which you are not comfortable answering or simply do not want to answer for whatever reason, please leave these unanswered. We will collect your completed questionnaire, and I will NOT see it - only Professor Kurosu will look at it because he may have questions he wants to follow up on at the time.

Note: Because the questionnaire has been translated, there may be some items you so not understand. Please answer them according to your best guess, and then star them (or highlight them in some way) so Professor Kurosu can clarify for you.

In appreciation for your time, we will give you a check for \$100 as I mentioned when I spoke with you.

I hope that this is clear to you but please feel free to contact me (email or phone) with any questions or concerns.

Meeting time

We will be coming to meet you on:

Friday, January 30

At:

7:00 pm

Your address is:

AAA BBB

Abcdefg hijklmn, YY NNNNN

Your phone number:

Home: (NNN) NNN-NNNN (preferred)

Cell: (NNN) NNN-NNNN

If any of these are incorrect, please let me know ASAP.

If, for any reason, you need to reschedule, please contact me at either my office (NNN.NNN.NNNN) or cell (NNN.NNN.NNNN)

We are looking forward to meeting you soon.

Best,

--Susan

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"If the USER can't use it,
it doesn't work!"™

3. 調査の実施

3.1 インフォーマント宅到着まで

当日の荷物は前日のうちに用意した。荷物としては、ビデオカメラ(三脚やバッテリー、AC ケーブルを含む)、ビデオテープ、デジタルカメラ、IC レコーダ、調査シート(説明資料はラミネータによって処理したものを用いた)、それとインフォーマント宅までの地図である。

あらかじめ決めておいた分担は、インタビューとパソコンによるノートテイクを Dr. Dray が、補足インタビューと録音を黒須が、ビデオとデジタルカメラの撮影、および記録用紙への回答記録、補足質問を橋爪が担当した。基本的に、ノートをタイプし、録音もしているので、そこからインフォーマントの回答を起こすことは可能だが、やはり記録用紙に直接記入しておいた方が後の処理は容易である。その意味では、今回の3名体制はちょうど良い組み合わせだったといえる。

全員が Dr. Dray の車に乗ってインフォーマント宅に向かったが、アメリカの道路地図は基本的に道路名で表示してあるため、道がわかりにくいことが多く、若干の時間的余裕をもって出発したものの、時間的にギリギリのこともあったし、携帯で場所を確認しなければならないこともあった。

3.2 インフォーマント宅到着

前日に Dr. Dray がインフォーマントに確認のメールを打っておいてくれたので、我々が到着すると、インフォーマントはすぐに歓迎の態度で受け入れてくれた。

天気や道路の話題など(当日は真冬で、あたりは完全に雪に覆われていた。気温はおよそマイナス 10-20 度であった)をしながら、室内に迎え入れられた。インタビュー

の場所としては、リビングルームもしくはダイニングルームが用いられた。



写真 インフォーマントの居宅



写真 インフォーマントの居宅

橋爪がビデオカメラのセットをしている間に、Dr. Dray

は同意書の説明とそこへの署名を依頼し、小切手で 100 ドルを渡した。開始前に謝礼を支払うのは、不快なことがあれば途中でやめることができる、という原則を具体的に示すためでもある。



写真 Dr. Dray とインフォーマント



写真 Dr. Dray とインフォーマント

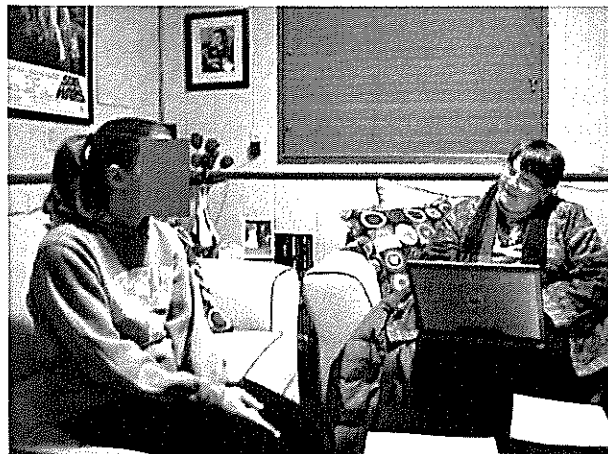


写真 Dr. Dray とインフォーマント



写真 Dr. Dray、インフォーマント、黒須とビデオカメラ

3.3 インタビュー(contextual inquiry)の導入

インタビューは基本的には protocol に書かれていた順番に進行した。ただし、各々に要した時間はインフォーマントによって異なる。

以下の発言はすべて Dr. Dray のものであり、contextual inquiry の場面において使用する言い回しの参考として、インフォーマントのひとり(70 代の女性)との対話の音声記録から書き起こし、ここに記載するものである。

なお、それらの発言の合間には、多々雑談(たとえば、日本だったら姪が大阪にいるんだけどとか、今朝は教会に行ったというような話)が入ったが、その部分は省略してある。そのような話題は明らかに雰囲気や和らげ、インフォーマントとの関係を友好的なものにする効果があった。

まず、同意書の記入を求めた。

- This is the form that will be used before they start the camera go.
- Go over the specifically culturally purposed study.
- We are looking for how values and information seeking behavior are related.
- This is a multi-cultural study.
- This will help Professor Masaaki-san and Ayako.

ここで日本側の自己紹介が入った。その後、日本側のスタンスを説明。

- At times Masaaki and Ayako talk each other in Japanese and Masaaki may ask you some questions.

次にインタビューの説明。

- So we asked you to fill up the questionnaire and I will ask you questions.

個人的情報の取得とその使い方についての説明。

- Both Ayako and Masaaki are part of the university so they may write publications for international journals.
- And if they use any images of you, the eyes will be covered so you may not be identified.

- We would like your permission for audio tape and video tape and this is just as back up for notes.
- And if you're willing to show them your house, that would be great because that is one of the things they are interested in to see how different American houses are from Japanese ones.
- And you don't have to show anything you don't want to.
- And I'd like you if there is anything that you don't want to audio-record, please say so.
- And we will have your name and address but only for record-keeping and they'll not keep them.
- Again, you know, you'll not gonna get on the television show.
- And anytime if you want to take a break or don't want to answer to questions, that's fine.

ここまでの説明を受けて、インフォーマントは同意書に署名。インフォーマントの一部を渡す。ここまででおおよそ 10 分。

- And this is the copy for you.
- If you would mind to sign in this, this is just to show that I did it indeed .

謝礼の小切手を渡す。

- And I'll give you the money.

インフォーマントからは、できるだけ協力してお役にたちたい、という趣旨の発言があった。第一段階が終わったので、ここで少し音楽(このインフォーマントはピアノ演奏をし、ブラームスが好きだった)関係の雑談が入った。

次に事前に送付してあった質問紙に関して。

- We just want to check if there was a question that was difficult to answer.

なお、この段階で、このインフォーマントが話し好きで、質問者サイドが適切にコントロールしないと、調査が予定時間内に終わらない可能性があることが感じられた。また音楽が趣味であり、そのあたりを突っ込んでゆくことになりそうだと考えられた。しかし結果的には 3 時間を超える例外的なインタビューとなった。通常は予定していた 2 時間でほぼ終了した。

3.4 インタビュー本体

ここからインフォーマントについて、ライフヒストリ一的な情報についてのインタビューが開始された。

- So I want to start.
- You can tell us a little bit about your life. You told me some of them on the call and it was fascinating.
- But Masaaki and Ayako also would like to know it.

すなわち、先に掲載したメールの前に、インフォーマントに対して電話で依頼を行ってあり、多少の話を聞いて

いたことになる。

次に具体的な質問に入ってゆく。

- Did you grow up here in town?
- こうした質問への回答に対する間の手としては、
- Hm
 - Hmmm
 - Wow
 - Yeah
 - Oh really!
 - Oh
 - Ah
 - That's good
 - OK
 - Interesting!
 - So fascinating
 - Absolutely

などが頻繁に用いられた。これらはインフォーマントの発話を促すために有効である。

次の質問は友人関係に関するものである。

- Do you still have friends here in town since when you were younger?
- Any friends from elementary school, middle-high school, high school ...

このような話から、具体的な質問に入っていった。たとえば音楽を演奏する仲間の話などがでてきたので、そのあたりにつっこんだ質問をして、インフォーマントの交友関係について明らかにし、同時に焦点課題の一つであるコミュニケーション(伝える)や情報探索(調べる)とハイテク機器、コンピュータ、そして携帯電話の利用法や利用歴について突っ込んだ質問をしていった。話を円滑にする関係で Dr. Dray や黒須は、自分の機器利用についても話をした。

このあたりで開始から 52 分。なお、タイムキーピングは Dr. Dray や黒須が時々腕時計を確認して、全体の進捗を制御した。

次にインフォーマントの一日の過ごし方を質問した。

- If you gonna say on a typical day, a typical weekday...
- このように、文章として完了しないうちにインフォーマントが回答を始めることも多かった。ここまでの開始から 58 分。

次に用意した質問票を用いた質問に入った。

- So you filled up the questionnaire. And that questionnaire is, as I see, quite fine.
- 最初は、Spranger の 6 類型で自分ほどの傾向が強いかを自己評価してもらうこと。
- That questionnaire is based on the theory of German philosopher named Edward Spranger.
 - He mapped with several different kinds of people and if

you could take a look at this.

- And I encourage you to look at the definition, not necessarily the word, because some of the words are a little bit misleading.
- Like religious, you don't have to be a church chorale or somebody who are overly religious in a traditional sense.
- So please look at that and would you say which one or two that most captures on the kind of person you are?

なお、この話のなかで、Dr. Dray はインフォーマントが離婚していたのかとの確認を行ったが、侵襲性の高い質問だったため、相当気を遣った言い方をして躊躇しながら、という雰囲気でも質問していた。ここまでで1時間21分。

次に、ラミネートシートや質問票を利用して、「通常の」人工物発達学的な質問、すなわち、どのような人工物を持っていて、どのような理由でそれを使うか、という質問に入った。

- So now, we talked about how we are interested in how values are related to other things.
- So these are lists of different ways that people can find information and communicate each other.
- There are paper things, small kind of things and people things.
- I want go through with you and see if you have these things, first of all.
- And also, if you do, I would like to have you this sheet to find out how often you use it and what are the reasons for you to use that particular thing.
- So the first would be the paper dictionary and the encyclopedia.

以下、同様にして表1を用いて質問を続けた。その際の基本的な質問は次のとおりである。Itの部分には具体的な名称で表現することが多かった。

- Do you have it?
- How often do you use it?
- Why would you use it? / Why are you using it?
- Any other reasons?
- Wouldn't you use other stuffs for that purpose?

ここまでで2時間38分。次に表2と表3を用いた質問に入った。

- Now we're gonna use the same list of things.
- I'm gonna ask you what you would do in the situation.
- Whether you gonna use one of these things or do nothing or use something else that's not obvious.
- And then we're gonna ask, instead of that top part of things, why would you use that in a particular way.
- So the first thing is, if you can't reach the destination that you're trying to get to driving (though you've come quite

close to it).

以下、同様にして設問を聞いて行った。補足的な質問は以下のようなものであった。

- And what about if want to ...
- So what would you like to use?
- And because .. / And the reason you would use it is ...
- Anything else? / Any other reasons?
- What did you use in the past?

ここまでで3時間01分。ここから宅内見学に入った。

3.5 サイトビジット

インタビュー終了後、インフォーマント宅を案内してもらい、使用しているコンピュータや携帯電話を見せてもらい、写真に収め、補足的な質問を行った。このようにインタビューと実地調査を兼ねるのが contextual inquiry の特徴でもある。

宅内見学が終わったのが3時間25分。



写真 インフォーマントの居宅の例(地下室)



写真 インフォーマントの使用しているパソコンの例

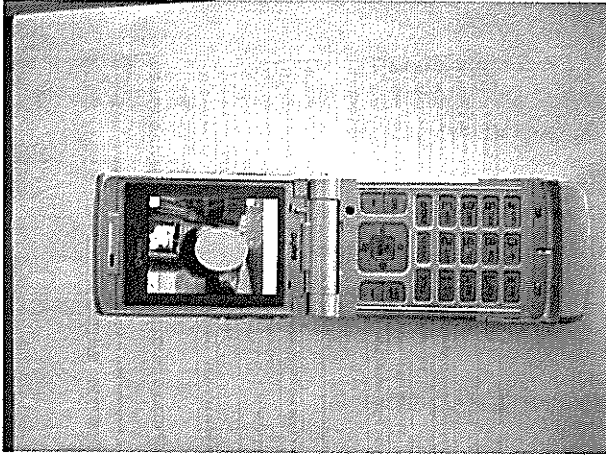


写真 インフォーマントの使用している携帯電話の例

3.6 ラップアップ

最後の段階では通常どおり、礼を述べ、雑談をしなが
ら引き上げた。

- Well thank you so much.
- And this is a beautiful house. Wonderful. Fabulous.
など。

3.7 インタビューノート

これらのインタビューの最中、Dr. Dray がタイプした
記録(インタビュー終了後に若干の編集がしてある)は下
記のようなものである。

Dr. Dray は顔はインフォーマントの方を向き、完全な
ブラインドタッチで記録を取っていた。これは驚異的な
スキルである。このようなスキルがない場合には、即日、
記録した音声聞きながら、このようなノートをまとめ
ることになる。なお、ノートに書いてある所要時間はあ
くまでも予定であり、実際とは異なる。

Name: NNNN
Age: 71
Gender: Female
Date: 1 February 2009

Notes

Entry (5 min)

- Entry, high level introductions, Informed consent, set up, collect questionnaire

Introduction to study (5 min)

- Anything they didn't understand in the questionnaire
- Check to see how they answered #71 → "Never"?

- LOVE music – answered it that way – music everywhere in the home

Background on the person (30 min)

- Life history – main events in their life
- Grew up here in Mpls – lived here most of life – as young person (grand rapids, MN, and in NJ one year) U of M – degree in zoology – that didn't get me a job – then training in medical technology
- Medical tech at blood bank for 23 yrs – became very boring – felt pushed away – was happy to retire – now doing what I want to do
- From MN?
 - If so, still friends with friends from elementary (etc) school? A few HS friends – not a lot of contact. Cousin (same age) had get together for elementary school, jr. high, high school → saw a lot of old friends, but don't stay in touch with them
 - Close to family – and have music friends
 - If not, still friends with people from where they came from?
- Occupation → retired from blood bank
- How spend a typical day?
 - Week day: if I don't have a definite plan, can sleep late. Typically, e.g., tomorrow, defensive driving lessons
 - Tuesday – friends are coming here to play music
 - Do domestic things
 - Weds – Roseville to play music, then shopping, then choir rehearsal
 - Thursday, dentist
 - Also helping her daughter – needs help – trying to sell some things – get financed in order. Trying to sell French Horn – special kind but none of the local folks play it
 - Week end day: lots of free time
 - Taking care of boy and child, also helps sister with driving stuff
- What kind of social activities are you involved in? music – chamber music with friends – 2 days/week – Tuesday and Wednesday – also

- choir (Wednesday and Sunday) concerts → series called "Thursday Musical"
- Many friends who play instruments? Yes – there are some I play with all the time – others occasionally
 - As soon as retired – asked if wanted to play chamber music – opened new life for me
 - Didn't get to know them until 2000 – many new friends through music
 - Went to a noon concert in St Paul – looked at friends – there were so many I have met through music – also music camps – Madeline Island, Wisconsin – they dropped us b/c focus is on youth – even though there were a lot of my age range – it was fun – performed – for me it was amazing b/c I wasn't nervous – at camp it was different to perform
 - Music is my great love – makes me happy
 - That and flowers – awards from city in appreciation – the Blooms award – likes Spring – flowers coming up. When son-in-law so ill – put in bulbs trying to keep mentally healthy
 - Nov 8 her son-in-law died [this was a major trauma for Joan and for her daughter]
 - When study playing music – reason? Friend who invited me to play music when younger? No - I didn't have a piano but I loved music – when I would visit grandparents – they had an old organ to pump pedals – I would struggle to play hymns – figured out how to read music – 9 yrs old. Grandfather paid for her lessons – and found place to practice - it was my own thing – no encouragement from family – but I loved it – and kept playing (there were yrs when I didn't play – no piano to practice) glad I did b/c now have a hobby
 - Relationship with people I play music with? In adult life, after retired from job. Person who called me = wife of choir member who had sung in choir in past who had asked her to play with cello (grad student – would fall asleep) Fun – but it ended for other reasons in life. This friend ("Joanie") gets everyone together – she teaches violin in Roseville – has a big grand piano and she has many groups getting together there – through her have met other people – so getting together with music friends – Tuesday they'll be here to play
 - How often play? 1/week on Tuesday, another group on Weds – both piano quartets – but this weds, we'll play piano trios b/c Joanie is away
 - Music lets you know younger person?
 - Also takes care of a 5 yr
 - Loves communicating with younger people – what aspect? I have a 16 yr old who's in Japan – through Facebook. She's going to school there, lives with host family.
 - Another (grand)niece calls from MA – 6 yrs old
 - Very close to family – age range – sister is 16 yr younger
 - Family party? Not often enough – we have a hard time arranging it – Thanksgiving, Christmas, summer party. Shy about inviting anyone other than family. This house is too small for big events
 - 1 daughter, 3 sisters and 1 brother (nothing to do with them) – 1 sister lives 1 mile away – spend a lot of time with her b/c she needs my help – no car right now
 - Also take care of child speaking Spanish – daughter worked with this young woman, and I had been taking care of baby who moved away – it left a "hole in my heart b/c she was so lovely – my daughter arranged for me to take care of this little guy – his mother = happy for him to come here to learn English (music?). They used to come 2 – 3 days/week, now 1 day/week – hard b/c they have moved far away and he started school. I have also started taking care of his younger brother – I enjoy it. How communicate with them? mother → has been here long enough so she has learned English well – I use email a lot – but not with this woman – b/c she doesn't check her email – mostly with cell phone – the 2 are lined – cell phone will pick up if out
 - When start using cell phone? 1998
 - At beginning, difficult to use? No – it was easy for me. I had it set up – I could hear a dial tone. First one was quite large. Now hers has a camera – daughter told me I can record little short messages
 - Don't use an iPod – don't need it b/c have nice music in car – don't need it when walking around. Would never get rid of cell phone

- Use of computer and internet: started using a PC in 1998 when quit job – but have used computer in work environment since 1978 (mainframe) at the blood bank – IT person wrote programs in Basic (maybe) – we had to work with him b/c he didn't know anything about blood banking
 - Internet? 1998 when I had my own PC in my home – have Windows 95, XP and Vista – have all 3 computers – keep them all – 2 monitors – the older one I can hook up either 95 (266 speed – very slow – was able to get photos off on CD burner) or XP
 - Comfortable with it? Yes – at first with Windows 95, had to call tech support, but now not so much
 - Making the change? I don't think it was hard – I was surprised when a young person came in and turned on Vista – think it had to do with Word – b/c it was very different – mostly use it to type address or letter – don't know what all the fancy things are b/c I don't need it. Not motivated b/c love Internet – love looking up information from internet – do shopping and banking all online – really like storage of photos – they look so good
 - In what kind of situation is internet, computer or cell phone difficult? Don't have any difficulty with them – sometimes surprised when I find things I didn't know – don't get frustrated with it – not sure why people complain about Vista – works for me. Had more of a problem getting used to mouse when first started.
 - Teaching the 5 yr old – difficult
 - Macintosh? No – know people who have them say it's the only way to go
 - Son-in-law (who passed away) had done word processing for temple for years – but then had to change software and he had to get a PC – had to admit it was good too
 - Daughter lives in St Paul – don't have the same pick up service for electronic equipment – so she comes over here to get rid of computer stuff
 - I jumped in at Windows 95 – my younger sister started with DOS
 - Internet shopping? Find or buy? Sewing machine wasn't working – found new one on website – it was here in 4 days
 - Don't do eBay
 - Amazon – have things in my shopping cart – if you apply for the Visa, you can get 30% off your purchases. Daughter told me they are getting tough issuing credit – so they research credit cards you have – like getting something for free
 - Buy almost everything online? Not clothes (don't want to do returns)
 - Love to go shopping – practically giving clothes away
 - Bought 2 Dell computers online, sewing machine, sewing table, paper for greeting cards
 - Anxious? No → at first I did but then I thought about how your credit info can be picked up anywhere – when it has "s" on address, says it's secure
 - Recently reviewing your insurance – for \$25/yr can get identity theft insurance
 - During day, how long use computer? Too much sometimes – turn my computer on before I make my coffee – habit forming → don't play Spider solitaire anymore
 - Connected with my friends – so as soon as I am online – get IM from friends (MSN)
 - Work – lab testing of blood – you have to be done at the end of the day – lots of bench work, and trained the new staff
- Values (about 25 min)**
- Show Spranger sheet of Value Dimensions: Which description best describes you?
Attitudes towards SOCIAL RELATIONSHIPS (life)
 - What parts are most applicable?
 - What parts don't fit so well? (if any)
 - Cross out Individualistic – not a power person
 - Social – passion to invest in people e-just helping them (not nec reaching their potential) people who are dear to me are the ones I want to help “see their potential” = can they play music better
 - Utilitarian is pathetic – am interested in what is useful
 - Theoretical: we won't know the answers though I am looking for knowledge (e.g., how to fix something)

- Religious: I am in awe of creation, but all the organized religion and the stuff we chant doesn't mean a lot to me
- Aesthetic: love creation – beauty, nature, etc.
- First = Social
- Ask: NOW, attitude about THINGS (“Utilitarian” and “Aesthetic”) (not people), does that change anything?
- Give a story or example that shows us how you fit the category
 - One night daughter called and said she was desperate – talking care of Bruce (post-chemo) – and he kept getting sweats and chills – I was talking to her at 11 pm – I can't keep up with this – so went to Wal-Mart and bought shirts, towels, etc. – went over and washed them to have her have them
 - Helping out the kids – mom is a single mom – thins didn't work out with the fathers. She was in the mortgage business – paid me \$5/hr – when everything went bad, she said she couldn't bring him any more – but I wanted to have him – I love him
- Now, (give them the profile sheet): How much would you say each of these describes you?
Attitude towards people first, then things
 - Would probably rate utilitarian about things – extremely practical
 - Was extremely pleasant and kind – I had to point out errors, discuss how to improve, etc. – tricky stuff
 - Patient teacher
- Do you have different attitudes towards different kinds of things (esp. electronic things)? (esp.: TV – is it furniture? PC – a tool? Cell phone? Car? (why chose) Impacts of aesthetics, cost, etc on these things.
- ALSO if time: ask about ordinary things – furniture (sofa), wine glass (expensive or plain)
- Profile when I was young: any changes? Was more focused on figuring out what to do with life. At this point, grateful to be alive – have had some scares – and more appreciative

of what there is – but have always had caring and compassion for people when young too.

- Have always been introvert – and very depressed in past

Information-seeking and communication (about 50 min)

Explain different means of getting information from sheet (everything until PC, then PC, PDA, Cell phone, and then to lower level again)

For each ask:

- Do you have this?
- When did you get it?
- Which aspects were most important to you when you bought it?
 - Performance
 - Functionality
 - Weight and size
 - Manufacturer or brand
 - Because it was intended for people like you
 - Design (looks good)
 - Ease of operation (how did they know that?)
 - Price
 - Other (describe)
- How often do you use it?
 - Almost every day or more
 - 3 – 5 times per week
 - Once a week
 - 2 – 3 times a month
 - Several times a year
 - Never
- Scenarios: 6 for Information seeking/6 for communication
 - Ask which one they would use?
 - Under what circumstances
 - Then ask why (turn over sheet)
 - IF answer with electronic means: How did you do it before you had this?

Wrap up

We've talked a lot about technology-related things. But obviously, technology is only part of what's important in life. What other things are important to you? For the thing that is most important:

- When did you get it?
- Which aspects were most important to you when you bought it?
 - Performance
 - Functionality
 - Weight and size
 - Manufacturer or brand
 - Because it was intended for people like you
 - Design (looks good)
 - Ease of operation (how did they know that?)
 - Price
 - Other (describe)

3.8 デブリーフィング

インタビュー終了後の打合わせは、Dr. Drayの詳細なNotesがあるため、全体的な確認を10-15分程度話すだけで終了した。

4. おわりに

今回の調査で、アメリカにおいて contextual inquiry と呼ばれている手法が、我々が日本で利用していた現地調査の手法と大きく異なる点はないことが確認された。もちろん、緻密な準備と実施法、それと後処理のやり方は大変参考になるものだった。

ただ、事前にアメリカにおける社会階層(上流、中流、下流)のあり方についてレクチャを受け、彼らの家を Dr. Dray の運転する車で見学するなどして、予備知識を得ておいたことは大変有益であった。また、事前出張により人工物発達学の考え方を Dr. Dray に良く理解してもらっていたことも、調査を円滑に遂行する上で有効であった。

今回の調査において、英語による質問の切り出し方や問い方のバリエーションを収集できたので、今後、英語を利用しているシンガポールなどで調査を行う場合には、現地コンサルタントに、インフォーマントの紹介と、おおよその現地事情のレクチャをしてもらうことだけで、調査が実施できる可能性が高いように思われる。

謝辞

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付録

以下に英語版の価値態度尺度と QOL 尺度を掲げる。

Questionnaire (Version 04)

Name

Email Address

Age

Q.1 On Your Values [72 question items]

Following questions ask about your value system in various situations of everyday life. **Please choose the answer that appears most appropriate.** If you are unsure about which response to give to a question, the first response you think of is often the best one.

Q.1 On Your Value System (1/6)		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	I consider whether my logic is consistent and not contradictory when thinking something through.	1	2	3	4	5
2	I have an interest in seeking patterns and general rules from complex ideas.	1	2	3	4	5
3	I think my existence is irrelevant in the massive scale of the universe.	1	2	3	4	5
4	I want to live my life so that I have no regrets when I die.	1	2	3	4	5
5	I want to share the joys and sorrows of others.	1	2	3	4	5
6	I enjoy working together with friends/colleagues towards a common goal.	1	2	3	4	5
7	I avoid learning things by heart and instead, work towards understanding fundamentals and logic when learning something new.	1	2	3	4	5
8	I am continuously seeking a better perspective or way of thinking.	1	2	3	4	5
9	I proactively make an effort to use things that are useful or convenient to me.	1	2	3	4	5
10	If the end result is the same, I make an effort to choose the course with the least trouble.	1	2	3	4	5
11	I try to express something that has made an impression on me on paper, in pictures or music etc..	1	2	3	4	5

Q.1 On Your Value System (2/6)		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
12	I look for the beauty in things and think about how that beauty could be enhanced.	1	2	3	4	5
13	I actively seek out new relationships with others.	1	2	3	4	5
14	I feel very bad when I realize I have hurt the feelings of another person.	1	2	3	4	5
15	I tend to go along the crowd.	1	2	3	4	5
16	I am wary of revealing my weaknesses and soft spots to others to avoid being taken advantage of.	1	2	3	4	5
17	I continue to press on until I have a satisfactory answer to a doubt or question.	1	2	3	4	5
18	I become overly concerned with things I don't really understand or that are vague.	1	2	3	4	5
19	I lose track of time when looking at a picture or photo that I like.	1	2	3	4	5
20	I find the arts relatively boring.	1	2	3	4	5
21	I continue to ponder something I do not understand until it is clear.	1	2	3	4	5
22	I quickly seek the cause or reason when something unexpected happens.	1	2	3	4	5
23	I am the type of person that will not cry over spilt milk and will try to learn from my mistakes.	1	2	3	4	5

Q.1 On Your Value System (3/6)		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
24	I focus more on long-term gains or losses rather than quick results.	1	2	3	4	5
25	I would like to be the kind of person who has an impact on others.	1	2	3	4	5
26	I get frustrated when I am in a situation I cannot control.	1	2	3	4	5
27	I set reasonable schedules based on my goals and specific circumstances.	1	2	3	4	5
28	I often attempt to achieve unrealistic goals and fail as a result.	1	2	3	4	5
29	I feel empathy for others once I have a good understanding of the way they live.	1	2	3	4	5
30	I get a sense of fulfillment in helping and assisting others.	1	2	3	4	5
31	I try to press my point when arguing with others.	1	2	3	4	5
32	I am reluctant to give instructions or orders to others.	1	2	3	4	5
33	I make an effort to employ the most appropriate work procedures or processes in order to be more efficient.	1	2	3	4	5
34	I consider the pros and cons when making an important choice and make a realistic decision.	1	2	3	4	5
35	I collect and display things that I find beautiful.	1	2	3	4	5

Q.1 On Your Value System (4/6)		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
36	I make an effort to find words that match my feelings and emotions.	1	2	3	4	5
37	I find it hard to find words that express the happiness I feel when I connect with someone.	1	2	3	4	5
38	I am not interested in deeply understanding other people.	1	2	3	4	5
39	I like to control a conversation so that it focuses on me.	1	2	3	4	5
40	I often find myself staring at things.	1	2	3	4	5
41	I quickly tire of looking at things like beautiful scenery.	1	2	3	4	5
42	I believe that the ideals of religion and faith are irrelevant to me.	1	2	3	4	5
43	I am constantly aware of the fact that at a certain point, my life will come to an end.	1	2	3	4	5
44	I find myself questioning the "what and why" about things.	1	2	3	4	5
45	I find the structure and workings of things interesting.	1	2	3	4	5
46	I find myself wasting time on things that are not really important.	1	2	3	4	5
47	I try to use small amounts of free time or time I spend waiting on something useful.	1	2	3	4	5

Q.1 On Your Value System (5/6)		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
48	I believe that life is never ending and continues before birth and after death.	1	2	3	4	5
49	I feel that some things in life happen for a reason.	1	2	3	4	5
50	I gain satisfaction from doing all that I can for someone close to me.	1	2	3	4	5
51	I try to avoid becoming too close to others.	1	2	3	4	5
52	I feel overly concerned when a member of a group or organization to which I belong expresses an opinion that differs to my own beliefs.	1	2	3	4	5
53	I like to play a leading role in a group situation.	1	2	3	4	5
54	I feel humbled by the massive scale of the universe and nature.	1	2	3	4	5
55	I find myself in awe of the magnificence and mysteries of life.	1	2	3	4	5
56	I find the task of analyzing and trying to understand things bothersome.	1	2	3	4	5
57	I use a dictionary to look things up that I don't understand.	1	2	3	4	5
58	I find myself thinking of what I can achieve in my lifetime.	1	2	3	4	5
59	I believe that there is a power greater than that of humans at work in the universe.	1	2	3	4	5
Q.1 On Your Value System (6/6)		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree

60	I look for sales and bargains when making a purchase.	1	2	3	4	5
61	I try to avoid wasting time and energy.	1	2	3	4	5
62	I sometimes feel the same level of affection towards objects around me as I do towards living things.	1	2	3	4	5
63	I sometimes feel strongly drawn to the shape or color of objects around me.	1	2	3	4	5
64	I sometimes think about why I have been placed on this earth.	1	2	3	4	5
65	I believe in living life to the fullest.	1	2	3	4	5
66	I listen closely to what others are saying and make an effort to accept their feelings.	1	2	3	4	5
67	I feel that I cannot ignore someone who is in trouble.	1	2	3	4	5
68	I want to work in a position of authority.	1	2	3	4	5
69	I sometimes feel like telling other people what to do.	1	2	3	4	5
70	I sometimes get into a novel or movie that I like and let my imagination run wild.	1	2	3	4	5
71	I ever feel energized when listening to a favorite song or tune.	1	2	3	4	5
72	I find trying to convince others on a topic or argument interesting.	1	2	3	4	5

Q.2 On Your Quality of Life (QOL) [38 question items]
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Following questions ask how you feel about your quality of life, health, or other areas of your life.

Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one. We ask that you think about your life in the last four weeks.

Part 1		Very Poor	Poor	Neither poor nor Good	Good	Very Good
19	How would you rate your quality of life?	1	2	3	4	5
Part 2		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied
10	How satisfied are you with your health?	1	2	3	4	5
Part 3		Not at all	A little	A moderate amount	Very much	An extreme Amount
6	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
24	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
3	How much do you enjoy life?	1	2	3	4	5
37	To what extent do you feel your life to be meaningful?	1	2	3	4	5

Part 4		Not at all	A little	A moderate amount	Very much	Extremely
2	How well are you able to concentrate?	1	2	3	4	5
33	How safe do you feel in your daily life?	1	2	3	4	5
22	How healthy is your physical environment?	1	2	3	4	5
Part 5		Not at all	A little	Moderately	Mostly	Completely
25	Do you have enough energy for everyday life?	1	2	3	4	5
38	Are you able to accept your bodily appearance?	1	2	3	4	5
23	Have you enough money to meet your needs?	1	2	3	4	5
30	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
31	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5
Part 6		Very poor	Poor	Neither poor nor good	Good	Very good
5	How well are you able to get around?	1	2	3	4	5

Part 7		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
7	How satisfied are you with your sleep?	1	2	3	4	5
29	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
28	How satisfied are you with your capacity for work?	1	2	3	4	5
4	How satisfied are you with yourself?	1	2	3	4	5
34	How satisfied are you with your personal relationships?	1	2	3	4	5
35	How satisfied are you with your sex life?	1	2	3	4	5
36	How satisfied are you with the support you get from your friends?	1	2	3	4	5
20	How satisfied are you with the conditions of your living place?	1	2	3	4	5
32	How satisfied are you with your access to health services?	1	2	3	4	5
21	How satisfied are you with your transport?	1	2	3	4	5
Part 8		Never	Seldom	Quite often	Very often	Always
1	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Part 9		Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
8	Have you become upset about trivial things recently?	1	2	3	4	5
9	Do you think that life is very hard?	1	2	3	4	5
11	Did you ever realize on what you wanted to do in your life before now?	1	2	3	4	5
12	Has your life been rather blessed by comparison with others?	1	2	3	4	5
13	Do you feel healthy and in good spirits this year as well as last?	1	2	3	4	5
14	Do you think that you have been becoming useless as you get old?	1	2	3	4	5
15	Do you feel satisfied with your life thinking back to days past?	1	2	3	4	5
16	Are you as happy now as you were when you were younger?	1	2	3	4	5
17	Do things keep getting worse as you get older?	1	2	3	4	5
18	As you get older, are things better than you thought?	1	2	3	4	5
26	Do you take things too seriously?	1	2	3	4	5
27	Are there a lot of unhappy things in your present life?	1	2	3	4	5