Appendix to "Choice and Happiness in South Africa"

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Abstract

This Appendix, not intended for publication, provides further details on our design, results, and interpretations.

1 Research design

1.1 Survey design

The starting point for our design was BHKR's "Cornell study," because this is the only one allowing for an analysis of which life goals besides happiness affect choices. We presented respondents with 8 hypothetical choice scenarios, 7 of which were directly adapted from BHKR, adjusting for the South African context.[1] For example, in one scenario we asked participants to imagine choosing between a job that pays R6000 (about $600) a month and allows 7.5 hours of sleep each day and one that pays R10,000 (about $1000) but only allows 6 hours of sleep. The same question appears in BHKR with income figures of $80,000 per year for 7.5 hours of sleep or $140,000 per year for 6 hours of sleep. For scenarios involving money,

[1] We took 6 scenarios (BHKR's 1, 3, 5, 6, 8, and 10) from the Cornell study. These include the only scenario asked in the CNSS study and two of the scenarios in the Denver study. We added a 7th scenario (BHKR's 13) that only appeared in the Denver study.

we chose the monetary figures to be comparable round figures to those in BHKR, adjusting for income differences. In the above scenario, the R6000 figure is slightly higher than the average household income reported by our respondents, and it is 60% of the alternative choice being offered. In some cases, adjustments were necessary for the social and economic context. For example, we replaced traveling home for Thanksgiving by plane with traveling to a friend's wedding by bus. Like BHKR, we also included a scenario where choice and happiness was predictable in order to test the validity of the methodology. This involved a choice between an apple or an orange, where BHKR predicted and found very few reversals and a particularly large effect of happiness on choice (as it turns out, in South Africa this scenario is a useful test on the methodology for reasons very different from the US, see Section 2.1 below). Finally, we included an 8th scenario involving a choice between luxury consumption (buying a nicer meal than usual) and paying down debt, because we thought this was a particularly realistic choice situation in our setting. The full list of scenarios is given below. Figures 1 and 2 illustrate the presentation of the scenarios in the survey.

Scenario 1: Job with more sleep v more income

Suppose that you have to decide between two new jobs. The jobs are exactly the same in almost every way, but have different work hours and pay different amounts.

Option 1: A job paying R 6,000 per month. The hours for this job are reasonable, and you would be able to get about 7.5 hours of sleep on the average work night.

Option 2: A job paying R 10,000 per month. However, this job requires you to go to work at unusual hours, and you would only be able to sleep around 6 hours on the average work night.

Scenario 2: Community work v spend money

Imagine that the school your child goes to (suppose you have one), implements a "student activity fee" of R 60 per week to help pay for maintenance of facilities and cleaning. However, the school allows you to not pay the fee if instead you put in 2 hours of work a week at the school helping with minor repairs or cleaning. You face two options:

Option 1: Spend 2 hours each week with school service.

Option 2: Pay R 60 each week.

Scenario 3: Live close to friends v more income

Imagine that you have been reassigned at your job, and will be moved to a new location. There are two offices where you could request to work. One office is in the town where many of your friends happen to be live, and pays 4800. The other office is in a town where you don't know anyone, and pays R 6600. Your job will be exactly the same at either office. You must decide between the following two options:

Option 1: Make R 4800 and move to the town where your friends are.

Option 2: Make R 6600 and move to a town where you don't know anyone.

Scenario 4: Attend social event v save money

Imagine that one of your closest friends moved to a different city three years ago. You recently received an invitation to his/her wedding where many of your mutual friends will attend. You face two options. Would you choose to go to the wedding if you had to buy a R 700 round-trip bus ticket and travel 8 hours each way to get there?

Option 1: Go the wedding, which requires a R 700 round trip bus ticket.

Option 2: Miss the wedding, but save the money.

Scenario 5: Nice meal v pay off debt

Suppose this month you received an extra R 150 in your paycheck.

Option 1: I would use the money to treat myself and my family to a nicer meal than usual.

Option 2: I would save the money and pay off my utility bill balance or other debt.

Scenario 6: Less money now v more money later

Suppose your employer wants to give you a bonus.

Option 1: R 300 now.

Option 2: R 350 in three months.

Scenario 7: More absolute income v more relative income

Say you are considering a new job, and have offers from two companies. Even though all aspects of the two jobs are identical, employees' salaries are different across the two companies. Everyone in each company knows the other employees' salaries. You must choose one of the two companies, which means you must decide between the following two options:

Option 1: Your monthly income is R 15,000, while on average others at your level earn R 17,500.

Option 2: Your monthly income is R 14,000 while on average others at your level earn R 11,500.

Scenario 8: Apple v orange

Suppose you are checking out a new supermarket that just opened near where you live. As you walk by the fresh fruit display, you are offered your choice of a free snack:

Option 1: A freshly sliced apple.

Option 2: A freshly sliced orange.

Suppose that you have to decide between two new jobs. The jobs are exactly the same in almost every way, but have different work hours and pay different amounts.
A Re re o tlhoka go tlhopa mo ditirong tse pedi di ntshwa . Ditiro tse di a tshwana gotlhelele , fela o dira di ura tse farologaneng mme o maogela letseno le le farologaneng

Option 1: A job paying R 6,000 per month. The hours for this job are reasonable, and you would be able to get about 7.5 hours of sleep on the average work night.
Tlhopho 1: *tiro e e duela dikete tse thataro (R6,000) ka kgwedi. Di ura tsa tiro e di a tlhaloganyega/amolosega, mme o bona di ura tse supa phegelwana tlhano (7,5) tsa boroko mo bosigong*

Option 2: A job paying R 10,000 per month. However, this job requires you to go to work at unusual hours, and you would only be able to sleep around 6 hours on the average work night.
Tlhopho 2: *Tiro e e duela dikete tse lesome (R10,000) ka kgwedi etswa lemororo, tiro e e tlhoka gore o tsene tirong di ura tse di sa tlwaelegang , o robala fela di ura tse thataro (6) bosigo.*

1. If you were limited to these two options, which do you think you would choose?
fa one o gapeletsega go kgetha magareng ga ditlhopo tse pedi tse, one o ka tlhopa efeng?

Option 1 / *Thlopho 1*			**Option 2** / *Thlopho 2*		
Sleep more but earn less / *Robala lobaka mme o amogele bonnye*			**Sleep less but earn more** / *Robala gannye mme o amogele madi a mantsi*		
Definitely choose/ *bo amaruri nka tlhopha*	Probably choose/ *gongwe nka tlhopa*	Possibly choose/ *go ka kgonagala gore ke tlhophe*	Possibly choose/ *bo amaruri nka tlhopha*	Probably choose/ *gongwe nka tlhopa*	Definitely choose */bo amaruri nka tlhopha*
X	X	X	X	X	X
Please circle one x in the line above/ *ka kopo tsenya X ka mo lesakaneng*					

2. If you were limited to these two options, which do you think would make you feel happier?
fa one o gapeletsega go kgetha ngwe ya ditlhopho tse, ke efeng e o akanyang gore e ka dira gore o ikutlwe botoka/ o thabile?

Option 1/ *Tlhopo 1*			**Option 2** / *Tlhopo 2*		
Sleep more but earn less/*Robala lobaka mme o amogele bonnye*			**Sleep less but earn more**/ *Robala gannye mme o amogele madi a mantsi*		
Definitely feel happier/ *bo amaruri nka ikutlwa ke thabile*	Probably feel happier/ *gongwe nka ikutlwa ke thabile*	Possibly feel happier/ *go ka kgonagala gore ke ikutlwe ke thabile*	Possibly feel happier / *go ka kgonagala gore ke ikutlwe ke thabile*	Probably feel happier / *gongwe nka ikutlwa ke thabile*	Definitely feel happier / *bo amaruri nka ikutlwa ke thabile*
x	X	X	X	X	X
Please circle one x in the line above/ *ka kopo tsenya X ka mo lesakaneng*					

Figure 1: Sample page from the survey

3. Between these two options, in the few minutes immediately after making the choice, which option do you think would make you feel better in terms of… Please circle one X in each row below.
Mo gareng ga ditlhopho tse pedi tse,mo metsosong e se kae morago ga gore o tlhope, ke tlhopho efe e o akanyang gore e tla dira gore o ikutlwe o botoka ka yone.....ka kopo tsenya X ka mo lesakaneng

	Option 1 / *tlhopo 1* **Sleep more but earn less/** *Robala lobaka mme o amogele bonnye*				**Option 2/ *tlhopo 2*** **Sleep less but earn more/** *Robala gannye mme o amogele madi a mantsi*		
	Definitely better/ *botoka ruri*	Probably better *Gongwe botoka*	Possibly better *Kgonag-alo ya botoka*	No difference *Ga gona phapano*	Possibly better *Kgonaga lo ya botona*	Probably better *Gongwe botoka*	Definitely better *botoka ruri*
Your own happiness/ *lethabo la gago*	X	X	X	X	X	X	X
Your family's happiness/ *lethabo la ba lelapa la gago*	X	X	X	X	X	X	X
Your health/ *Boitekanelo*	X	X	X	X	X	X	X
Your romantic life/ *botshelo ba lerato*	X	X	X	X	X	X	X
Your social life/ *botshelo botlhe*	X	X	X	X	X	X	X
Your control over your life/ *Taolo ya botshelo ba gago*	X	X	X	X	X	X	X
Your life's level of spirituality/ *maemo a botshelo ba semoya ba gago*	X	X	X	X	X	X	X
Your life's level of fun/*Maemo a boithabiso mo botshelong ba gago*	X	X	X	X	X	X	X
Your social status/ *maemo a botshelo ba gago ba bo tsalano*	X	X	X	X	X	X	X
Your life's non-boringness/ *Go tlhoka bodutu bophelong ba gago*	X	X	X	X	X	X	X
Your physical comfort/ *Go itshetlega ga gago mo mmeleng*	X	X	X	X	X	X	X
Sense of purpose/ *Maikutlo a boikemisetso*	X	X	X	X	X	X	X

Figure 2: Sample page from the survey

1.2 Sampling and implementation

We randomly sampled 1000 households from the full list of residential addresses in the townships of Mabopane, Ga-Rankuwa, and Winterveldt. The original sampling was done for a project on residential water consumption (Szabó and Ujhelyi, 2015), and we included our choice scenarios at the end of the last survey for that project. All households were surveyed in February 2013. Our surveyors visited each address and interviewed an adult member of the household. Surveys were conducted face to face at the respondent's home. Our surveyors received special training for this project; they are local residents employed by a survey and market research company with extensive experience working in the area. Questionnaires were available in both English and the local language (Setswana). 34 households could not be located or refused to participate, resulting in a sample size of 966.

In our sample, average household size is slightly above 4 with one member employed, average monthly household income is around 6000 Rand ($\approx$ 600 USD), and two-thirds of the respondents completed high school. These characteristics are close to those reported by the South African statistical agency for the average Black household in the country. For these households, average monthly income is R 5,803, household size is 3.98, and the unemployment rate is 40% (Statistics South Africa, http://beta2.statssa.gov.za/).

Histograms of our raw data on the answers to the choice, SWB and other life goal questions appear in Figure 3.

2 Results

2.1 Choice-SWB reversals

A noteworthy feature of Table 1 in the paper is that respondents tend to prefer more money, both in terms of choice and SWB. For example, in the first column, 78% would choose more income and less sleep and 79% predict that more income would yield higher SWB. We observe a similar pattern in the remaining scenarios: respondents prefer to contribute community work rather than spend money, earn more rather than live among friends, save money rather than go to a wedding, and have a higher absolute income rather than a higher relative income. In "Less money now v more money later" scenario, respondents prefer money now rather than later. These patterns are of course what one would expect given the low incomes in the sample.

One scenario that requires some discussion is the "test" scenario involving a choice between two free snacks, an apple or an orange. BHKR included this question because response patterns are predictable (in the US context, one would expect few reversals), thus providing

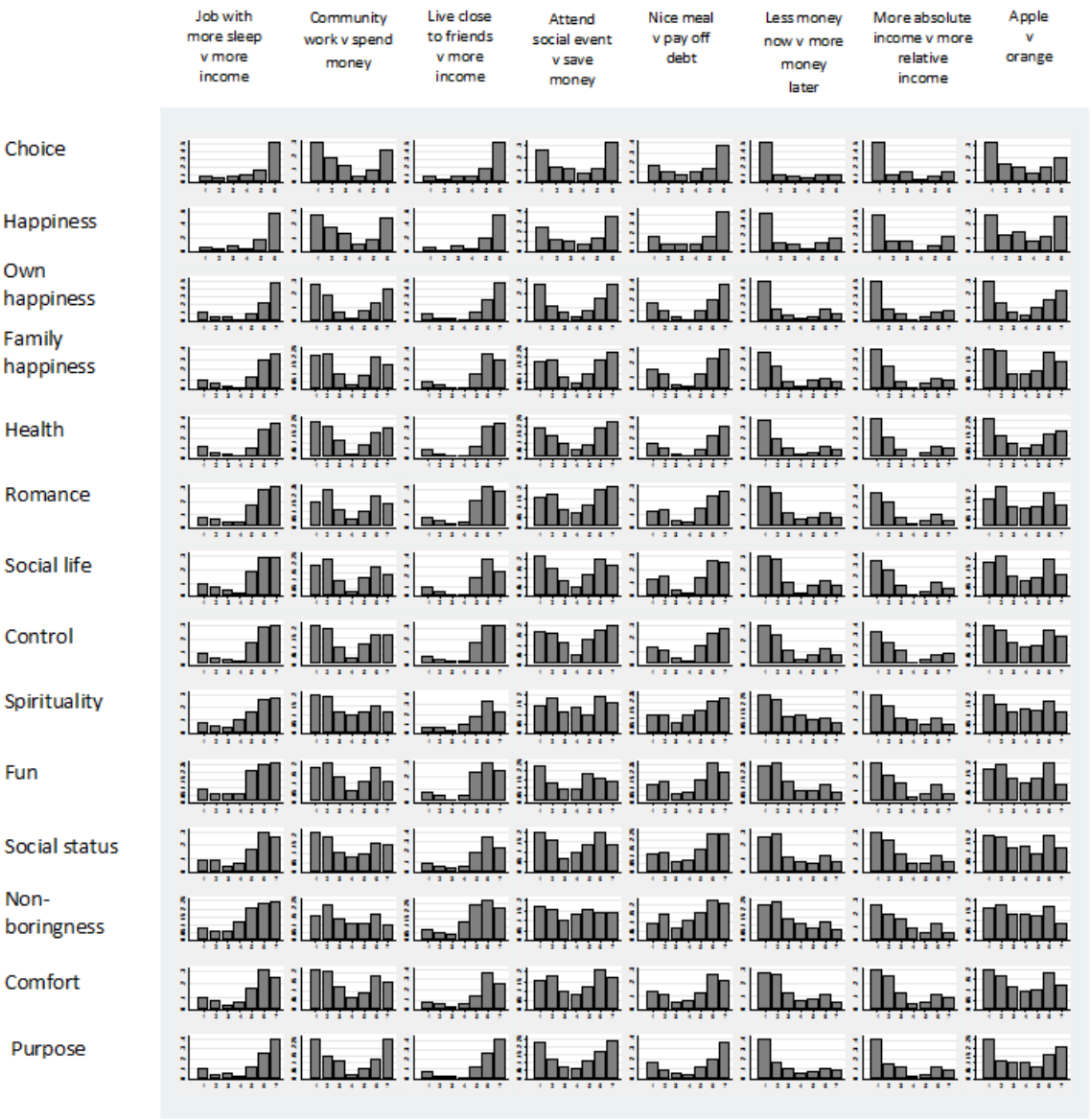


Figure 3: Histograms of choice, SWB and other life goals, by scenario

a check on the methodology. In the South African case we find that this scenario yields one of the largest fraction of reversals (15 percent). It turns out that, in this context, these patterns also provide support for the methodology. As we became aware after the conclusion of our survey, there exists in South Africa a powerful urban legend about somebody handing out free oranges infected with HIV. This conspiracy theory, going back to the 1990s, was documented to be part of the local culture as recently as 2011 (Sivela, 2012). Such beliefs mean that this choice scenario *should* involve trade-offs between own happiness (a taste for a fruit) and other goals, health in particular, especially for those who like oranges. Indeed, we find that while our respondents were evenly split between assigning higher SWB to apples or oranges, this scenario yielded the largest difference in reversals. 24 percent of those preferring oranges based on SWB said that they would choose an apple, while only 7 percent of those preferring apples would choose an orange. Below, we also find direct evidence that concerns about health and romantic life were strong determinants of choice in this scenario. In the South African context, these patterns make perfect sense and are exactly what one would expect in the presence of beliefs about HIV infected oranges.

2.2 Determinants of choice

Table 1 below repeats Table 2 from the paper and adds ordered Probit and Probit regressions for comparison.

The finding that choices closely reflect family happiness and sense of purpose echoes the results from a series of interviews reported by Clark (2003) who collected what people in two South African townships thought to be important aspects of a "good life." It is also noteworthy that these same aspects are also typically rated as being highly important in surveys in other countries (e.g., Ryff, 1989). We find that the goals rated as important in the US and elsewhere are also highly correlated with choices in our low-income South African sample.

Table 2 below regresses the score on own happiness on the other 11 goals. Across all scenarios, these goals explain 86 percent of the variation in which option makes a person happier. For the individual scenarios, this R^2 is always above 80 percent. In our sample, respondents appear to perceive little conflict between SWB and other goals in life.

Table 1: Regressions of choice on SWB and other goals

		OLS		Ordered Probit	Probit
Own happiness	0.569***		0.312***	0.247***	0.195***
	(0.007)		(0.024)	(0.019)	(0.021)
Family happiness		0.250***	0.136***	0.111***	0.173***
		(0.024)	(0.025)	(0.020)	(0.023)
Health		0.090***	0.028	0.018	0.014
		(0.024)	(0.024)	(0.020)	(0.024)
Life's level of romance		-0.013	-0.028	-0.018	0.017
		(0.023)	(0.022)	(0.019)	(0.024)
Social life		0.032	-0.005	-0.009	-0.041*
		(0.023)	(0.022)	(0.019)	(0.024)
Control over your life		0.036*	0.011	0.002	0.041*
		(0.021)	(0.021)	(0.019)	(0.023)
Life's level of spirituality		-0.042**	-0.059***	-0.071***	-0.102***
		(0.020)	(0.019)	(0.018)	(0.024)
Life's level of fun		0.031	0.040**	0.025	0.090***
		(0.020)	(0.019)	(0.018)	(0.022)
Social status		0.029	0.010	0.011	-0.002
		(0.023)	(0.023)	(0.020)	(0.026)
Life's nonboringness		-0.066***	-0.048**	-0.081***	-0.009
		(0.022)	(0.022)	(0.020)	(0.026)
Physical comfort		0.023	0.020	0.003	0.029
		(0.025)	(0.024)	(0.021)	(0.027)
Sense of purpose		0.260***	0.197***	0.191***	0.107***
		(0.022)	(0.022)	(0.019)	(0.022)
Observations	7451	7451	7451	7451	7451
(pseudo) R^2	0.4867	0.4899	0.5104	0.2392	0.4907

Notes: The dependent variable is choice on a 6-point scale for OLS and Ordered Probit, and on a binary scale for Probit. All independent variables are on a 7-point scale. Variables are demeaned at the scenario level for the OLS regressions. Ordered Probit and Probit regressions include scenario fixed effects. Robust standard errors in parentheses. ***, **, * denote significance at the 1, 5, and 10 percent, respectively.

Table 2: Predicting happiness with other life goals

Choice scenario	All scenarios pooled	Job with more sleep v more income	Community work v spend money	Live close to friends v more income	Attend social event v save money	Nice meal v pay off debt	Less money now v more money later	More absolute income v more relative income	Apple v orange
Family happiness	0.368***	0.399***	0.332***	0.191***	0.466***	0.362***	0.380***	0.412***	0.340***
	(0.025)	(0.063)	(0.060)	(0.064)	(0.060)	(0.071)	(0.066)	(0.075)	(0.071)
Health	0.200***	0.162***	0.210***	0.296***	0.222***	0.314***	0.213***	0.231***	0.115**
	(0.022)	(0.051)	(0.054)	(0.063)	(0.052)	(0.064)	(0.059)	(0.063)	(0.056)
Life's level of romance	0.050**	0.084	0.127*	0.038	0.048	0.104	0.068	-0.045	-0.040
	(0.024)	(0.057)	(0.065)	(0.062)	(0.060)	(0.074)	(0.051)	(0.061)	(0.071)
Social life	0.122***	0.049	0.121**	0.013	0.036	0.134**	0.046	0.344***	0.195***
	(0.023)	(0.053)	(0.053)	(0.052)	(0.053)	(0.064)	(0.049)	(0.080)	(0.071)
Control over your life	0.078***	0.086*	0.170***	0.159***	0.064	-0.007	0.018	-0.034	0.080
	(0.020)	(0.051)	(0.052)	(0.051)	(0.045)	(0.054)	(0.049)	(0.049)	(0.072)
Life's level of spirituality	0.052***	0.001	0.038	0.031	0.067*	0.057	-0.027	-0.052	0.292***
	(0.018)	(0.042)	(0.045)	(0.044)	(0.037)	(0.042)	(0.039)	(0.051)	(0.073)
Life's level of fun	-0.026	-0.030	-0.100**	0.015	-0.065**	-0.032	0.032	-0.001	0.040
	(0.016)	(0.037)	(0.043)	(0.048)	(0.029)	(0.040)	(0.042)	(0.045)	(0.074)
Social status	0.062***	0.000	0.070	0.046	0.118***	-0.009	0.095*	0.082	0.039
	(0.021)	(0.044)	(0.058)	(0.057)	(0.045)	(0.055)	(0.050)	(0.066)	(0.071)
Life's nonboringness	-0.059***	-0.035	-0.085**	-0.080*	-0.034	-0.048	0.006	0.004	-0.112
	(0.018)	(0.043)	(0.041)	(0.047)	(0.045)	(0.047)	(0.043)	(0.046)	(0.070)
Physical comfort	0.009	0.068	-0.029	0.024	0.023	0.026	-0.005	-0.028	0.022
	(0.022)	(0.047)	(0.059)	(0.055)	(0.052)	(0.068)	(0.056)	(0.057)	(0.088)
Sense of purpose	0.201***	0.259***	0.204***	0.295***	0.139***	0.135**	0.234***	0.141***	0.099
	(0.021)	(0.048)	(0.054)	(0.060)	(0.047)	(0.053)	(0.048)	(0.047)	(0.073)
Observations	7473	937	939	934	933	931	932	931	936
R^2	0.860	0.855	0.896	0.821	0.896	0.875	0.877	0.897	0.801

Notes: Happiness regressed on other goals. All variables are on a 7-point scale and demeaned at the scenario level. Robust standard errors in parentheses. ***, **, * denote significance at the 1, 5, and 10 percent, respectively.

3 Heterogeneity

3.1 Heterogeneity between scenarios

To explore the heterogeneity of our findings across scenarios further, Table 3 presents regressions similar to those in Table 1 above separately by scenario (the first column reproduces column 3 from Table 1 for comparison). For each scenario, choice is first regressed on SWB and then we add the other life goals. The table presents the latter regressions, and indicates the change in R^2 as the 11 life goals are added.

We note that the incremental R^2 is highest for decisions that are most realistic in the context of the study (being asked to contribute time vs. money at a child's school, spending a small unexpected bonus on a nice meal vs. fulfilling a debt obligation, choosing between an apple and an orange). These scenarios, which are the closest to decisions respondents may face in everyday life, are most affected by additional life goals besides happiness. Interestingly, this is exactly what BHKR find in the US, where decisions deemed most relevant for respondents also resulted in the highest incremental R^2.

Recall that the decision making process in the apple vs. orange scenario is partially predictable due to the urban legend about oranges infected with HIV. Indeed, we see that health considerations are particularly important determinants of choice in this scenario, as is respondents' concern about their romantic life.[2]

[2]While a significant association between romantic life and choice is expected given beliefs about HIV infected oranges, the negative coefficient on "romantic life" is somewhat surprising. A possible explanation is that respondents who think about HIV when making this choice may view sexual activity as undesirable. Alternatively, those who believe in HIV infected oranges may also hold other unusual beliefs about the association between romantic life and fruits, or about the connection between HIV and romantic life.

Table 3: Regressions of choice on happiness and other goals, by scenario

Choice scenario	All scenarios pooled	Job with more sleep v more income	Community work v spend money	Live close to friends v more income	Attend social event v save money	Nice meal v pay off debt	Less money now v more money later	More absolute income v more relative income	Apple v orange
Own happniess	0.312***	0.308***	0.287***	0.300***	0.278***	0.348***	0.304***	0.352***	0.298***
	(0.024)	(0.066)	(0.069)	(0.072)	(0.068)	(0.066)	(0.066)	(0.072)	(0.058)
Family happiness	0.136***	0.113	0.029	0.113*	0.193***	0.221***	0.268***	0.136*	0.047
	(0.025)	(0.070)	(0.063)	(0.066)	(0.073)	(0.073)	(0.065)	(0.081)	(0.067)
Health	0.028	-0.012	-0.032	0.066	-0.002	-0.082	-0.067	0.007	0.171***
	(0.024)	(0.054)	(0.070)	(0.060)	(0.076)	(0.066)	(0.057)	(0.071)	(0.058)
Life's level of romance	-0.028	0.021	-0.019	-0.101	0.075	-0.100	-0.019	-0.008	-0.169**
	(0.022)	(0.057)	(0.063)	(0.062)	(0.065)	(0.067)	(0.053)	(0.061)	(0.067)
Social life	-0.005	0.068	0.014	0.019	-0.026	0.013	0.034	-0.037	-0.038
	(0.022)	(0.062)	(0.061)	(0.051)	(0.065)	(0.065)	(0.046)	(0.062)	(0.073)
Control over your life	0.011	0.004	-0.090	-0.063	0.097*	0.072	0.058	-0.009	-0.057
	(0.021)	(0.056)	(0.061)	(0.056)	(0.057)	(0.058)	(0.048)	(0.057)	(0.064)
Life's level of spirituality	-0.059***	-0.039	-0.069	-0.012	-0.153***	-0.096*	-0.094**	-0.071	0.081
	(0.019)	(0.050)	(0.052)	(0.050)	(0.054)	(0.056)	(0.043)	(0.054)	(0.072)
Life's level of fun	0.040**	-0.068	0.158***	0.086*	0.018	-0.037	0.055	0.098*	0.112
	(0.019)	(0.047)	(0.059)	(0.051)	(0.042)	(0.059)	(0.046)	(0.054)	(0.076)
Social status	0.010	0.022	0.011	-0.050	0.086	0.091	-0.048	0.085	-0.108
	(0.023)	(0.058)	(0.065)	(0.066)	(0.062)	(0.060)	(0.053)	(0.061)	(0.079)
Life's nonboringness	-0.048**	0.007	-0.174***	-0.114*	-0.120*	-0.034	-0.019	-0.101*	0.156**
	(0.022)	(0.060)	(0.059)	(0.059)	(0.069)	(0.064)	(0.051)	(0.058)	(0.074)
Physical comfort	0.020	0.018	-0.015	0.029	0.068	0.009	0.015	0.015	0.056
	(0.024)	(0.060)	(0.075)	(0.064)	(0.065)	(0.067)	(0.053)	(0.066)	(0.079)
Sense of purpose	0.197***	0.092*	0.443***	0.229***	0.146**	0.209***	0.211***	0.184***	0.092
	(0.022)	(0.055)	(0.067)	(0.063)	(0.066)	(0.061)	(0.052)	(0.060)	(0.064)
Observations	7451	935	937	929	932	926	929	930	933
R^2	0.510	0.408	0.486	0.365	0.581	0.530	0.633	0.603	0.513
Incremental R^2	0.034	0.001	0.056	0.036	0.039	0.050	0.037	0.042	0.069

Notes: OLS regressions. The dependent variable is choice on a 6-point scale and all independent variables are on a 7-point scale. Variables are demeaned at the scenario level. Incremental R^2 is the change in the R^2 of the regression as the 11 goals other than own happiness are added. Robust standard errors in parentheses. ***, **, * denote significance at the 1, 5, and 10 percent, respectively

3.2 Heterogeneity between individuals

Which respondents are more likely to exhibit choice-SWB reversals and which ones tend to choose what makes them happy? In Table 4 we look at this question by regressing the incidence of reversals on various individual characteristics of the respondents. These were collected as part of the survey, and include the respondent's gender, age, marital status, household size (adults and children), highest level of education, and household income. For the latter, we have 143 missing values. To maximize the number of observations and limit measurement error, we use observed income and ownership of various household appliances to predict household income (in logs), and use these predicted values for the entire sample.[3]

In the first column of Table 4, our dependent variable is the number of scenarios in which the respondent exhibited a reversal. In the remaining columns, the dependent variable is 1 if the respondent exhibited a reversal in the given scenario, and 0 otherwise. In all regressions, respondents who indicated indifference in the SWB question are coded as missing. The regressions in Table 4 are estimated with OLS. For the individual scenarios, Table 5 presents similar results from Probit regressions.

The regressions in this table tend to paint a consistent picture: the same types of respondents are likely to exhibit reversals in all scenarios. We find that choice-SWB reversals are significantly less likely among men, older respondents, widowers, and those with fewer children. Given our earlier results, these patterns make perfect sense. As we saw in Section 2.2, one's family's happiness was one of the strongest correlates of choice apart from SWB. Thus, we would expect respondents for whom family is more important to exhibit more reversals, and respondents for whom family carries less weight to more often base their choices on own happiness. This is exactly what we find: older men, widowers, and those with fewer children are likely to attach less importance to family, and they are particularly likely to choose what makes them personally happy.

[3] Predicted income is based on the regression $\ln(Y+1) = \boldsymbol{\beta}\mathbf{X} + \varepsilon$ where Y is reported income in Rand, and $\mathbf{X}$ includes ownership of the following: hot running water, TV, DVD player, car, cellphone, refrigerator.

Table 4: Reversals and respondent characteristics

Choice scenario	Total reversal	Job with more sleep v more income	Community work v spend money	Live close to friends v more income	Attend social event v save money	Nice meal v pay off debt	Less money now v more money later	More absolute income v more relative income	Apple v orange
Male	-0.238**	-0.054**	-0.049**	-0.081***	-0.036	-0.020	-0.002	-0.010	0.007
	(0.116)	(0.022)	(0.024)	(0.022)	(0.023)	(0.024)	(0.020)	(0.020)	(0.024)
Age	-0.014**	-0.001	-0.001	-0.002*	-0.002*	-0.004***	-0.003***	-0.003**	-0.003***
	(0.006)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Divorced	0.119	-0.032	-0.031	-0.062	-0.013	-0.034	0.021	-0.028	0.075
	(0.448)	(0.061)	(0.070)	(0.062)	(0.061)	(0.059)	(0.055)	(0.048)	(0.076)
Widowed	-0.391**	-0.103***	-0.075*	-0.120***	-0.002	-0.117***	0.022	-0.061**	-0.056
	(0.163)	(0.030)	(0.043)	(0.034)	(0.043)	(0.033)	(0.036)	(0.030)	(0.040)
Single	0.045	0.017	-0.012	-0.032	0.015	-0.018	-0.003	-0.000	0.009
	(0.144)	(0.028)	(0.029)	(0.028)	(0.027)	(0.029)	(0.024)	(0.025)	(0.029)
Number of adults in the HH	0.028	-0.005	-0.001	0.007	0.012	0.010	-0.006	-0.002	-0.010
	(0.044)	(0.009)	(0.010)	(0.009)	(0.010)	(0.010)	(0.007)	(0.007)	(0.009)
Number of children	0.103**	0.002	0.012	-0.004	0.015*	0.031***	0.014**	0.016**	0.022***
	(0.044)	(0.007)	(0.009)	(0.008)	(0.009)	(0.010)	(0.006)	(0.007)	(0.009)
Primary school	0.325	0.028	0.100*	0.103**	0.046	-0.012	0.033	0.026	0.060
	(0.203)	(0.048)	(0.051)	(0.043)	(0.049)	(0.056)	(0.027)	(0.040)	(0.050)
High school	-0.158	-0.038	-0.015	-0.012	-0.010	-0.095*	0.006	-0.036	-0.004
	(0.205)	(0.049)	(0.051)	(0.044)	(0.050)	(0.056)	(0.029)	(0.041)	(0.052)
Income	-0.222	-0.158	-0.071	0.058	-0.059	-0.106	-0.244*	0.065	-0.279*
	(0.607)	(0.118)	(0.126)	(0.118)	(0.124)	(0.154)	(0.130)	(0.084)	(0.150)
Income squared	0.088	0.058	0.017	-0.012	0.029	0.041	0.083**	-0.016	0.076*
	(0.189)	(0.037)	(0.040)	(0.037)	(0.039)	(0.047)	(0.040)	(0.027)	(0.045)
Observations	818	939	937	936	924	937	928	942	911

Notes: OLS regressions. In the first column, the dependent variable is a respondent's total number of choice-SWB reversals; in the other columns it is an indicator equal to 1 if the respondent exhibited a reversal in the given scenario. 'Primary school' is 1 if the respondent's highest level of completed education is primary school; 'High school' is 1 if it is high school or above. Income is measured in logs and predicted based on ownership of household appliances as described in the text. All regressions include a constant. Robust standard errors in parentheses. ***,**,* denote significance at the 1, 5, and 10 percent, respectively.

Table 5: Reversals and respondent characteristics, probit regressions

Choice scenario	Job with more sleep v more income	Community work v spend money	Live close to friends v more income	Attend social event v save money	Nice meal v pay off debt	Less money now v more money later	More absolute income v more relative income	Apple v orange
Male	-0.278**	-0.216**	-0.425***	-0.177	-0.102	-0.030	-0.067	0.019
	(0.114)	(0.107)	(0.116)	(0.109)	(0.108)	(0.119)	(0.116)	(0.107)
Age	-0.004	-0.005	-0.010*	-0.009*	-0.018***	-0.021***	-0.015**	-0.013***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.005)
Divorced	-0.151	-0.104	-0.279	-0.087	-0.191	0.125	-0.204	0.313
	(0.338)	(0.321)	(0.346)	(0.330)	(0.335)	(0.325)	(0.365)	(0.281)
Widowed	-0.721**	-0.354	-0.835**	-0.035	-0.920***	0.153	-0.580*	-0.349
	(0.327)	(0.236)	(0.341)	(0.219)	(0.334)	(0.241)	(0.326)	(0.279)
Single	0.088	-0.040	-0.157	0.044	-0.105	-0.028	-0.008	0.034
	(0.131)	(0.123)	(0.132)	(0.126)	(0.126)	(0.148)	(0.138)	(0.124)
Number of adults in the HH	-0.017	-0.005	0.044	0.054	0.045	-0.049	-0.015	-0.047
	(0.050)	(0.046)	(0.048)	(0.046)	(0.046)	(0.049)	(0.047)	(0.045)
Number of children	0.010	0.053	-0.016	0.062*	0.127***	0.087**	0.091**	0.101***
	(0.037)	(0.036)	(0.038)	(0.036)	(0.036)	(0.037)	(0.038)	(0.036)
Primary school	0.132	0.433	0.587*	0.220	-0.069	0.338	0.200	0.338
	(0.271)	(0.264)	(0.312)	(0.264)	(0.264)	(0.299)	(0.308)	(0.295)
High school	-0.205	-0.040	0.040	-0.030	-0.454*	0.178	-0.144	0.067
	(0.278)	(0.271)	(0.326)	(0.274)	(0.272)	(0.309)	(0.316)	(0.307)
Income	-0.811	-0.279	0.481	-0.177	-0.449	-1.514**	0.577	-1.149*
	(0.601)	(0.554)	(0.707)	(0.623)	(0.694)	(0.698)	(0.624)	(0.595)
Income squared	0.300	0.064	-0.110	0.105	0.185	0.515**	-0.145	0.312*
	(0.187)	(0.175)	(0.215)	(0.192)	(0.211)	(0.214)	(0.192)	(0.185)
Observations	939	937	936	924	937	928	942	911

Notes: The dependent variable is an indicator equal to 1 if the respondent exhibited a reversal in the given scenario. 'Primary school' is 1 if the respondent's highest level of completed education is primary school; 'High school' is 1 if it is high school or above. Income is measured in logs and predicted based on ownership of household appliances as described in the text. All regressions include a constant. Robust standard errors in parentheses. ***,**,* denote significance at the 1, 5, and 10 percent, respectively.

4 Comparison with BHKR

4.1 Further caveats

Relevant cultural differences between the US and South Africa could in principle include how people think of "happiness." While we have no direct evidence of this, our fieldworkers and translators assured us that the word "happiness" (lethabo) is interpreted similarly in English and Setswana. We are aware of one paper in psychology studying whether various measures of well-being make sense in Setswana and whether they yield comparable scales to their English counterpart. That paper concludes that they do (Wissing et al., 2010).

Phone surveys or self-administered questionnaires would not have been practical in our context. The difference in the survey method could be relevant if respondents are more likely to admit to choice-SWB reversals in impersonal, self-administered surveys than face-to-face to an interviewer. This possibility is mitigated by the significant experience of our surveyors. Our fieldworkers are members of the local community who regularly conduct surveys on topics much more sensitive than ours in this population, including projects on health or sexual behavior. They are trained to overcome issues of trust and respondent bias in these delicate situations.

4.2 Cornell study

Choice-SWB reversals. One obvious difference with the Cornell sample is that our respondents are older on average. Table 6 repeats Table 1 in the paper for respondents under the age of 30, and find very similar results to those shown there, with an average concordance of 86% and a range of 83-89% across scenarios.

Table 7 summarizes Choice-SWB reversals in the two studies. Figure 4 shows the histogram of the number of reversals across individuals in our sample.

Table 6: Choice and SWB responses across scenarios among respondents under the age of 30

Choice scenario	Job with more sleep v more income %	Community work v spend money %	Live close to friends v more income %	Attend social event v save money %	Nice meal v pay off debt %	Less money now v more money later %	More absolute income v more relative income %	Apple v orange %
Higher SWB: Option 1 Chosen: Option 1	16.81	61.75	14.04	58.04	38.05	55.05	72.57	47.75
Higher SWB: Option 2 Chosen: Option 2	69.91	32.46	74.56	28.57	45.13	33.03	12.39	33.33
Higher SWB: Option 2 Chosen: Option 1	7.96	10.53	7.02	7.14	10.62	6.42	9.73	16.22
Higher SWB: Option 1 Chosen: Option 2	5.31	5.26	4.39	6.25	6.19	5.50	5.31	2.70
Indifference for SWB	0	0	0	1.75	0.88	3.51	0.88	2.63
p-value of Liddell Exact Test	0.6072	0.2379	0.5811	1.0000	0.3593	1.0000	0.3323	0.0015
N	113	114	114	112	113	109	113	111

Notes: For each scenario, the first four rows present the distribution of responses among those who did not indicate indifference for the SWB question. The fraction of indifferent SWB responses is indicated in the fifth row. The Liddell test tests the hypothesis that the average choice response is equal to the average SWB response for paired data.

Table 7: Comparison with BHKR's Cornell study

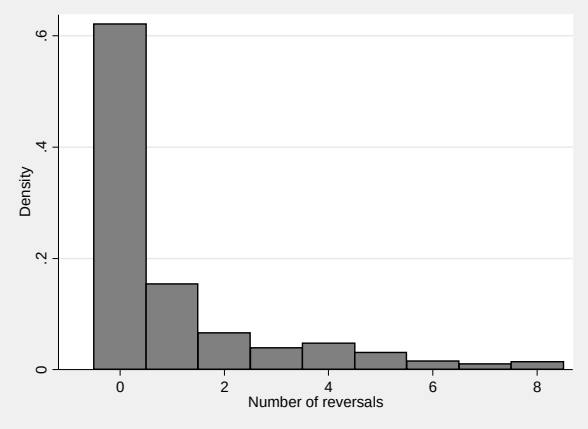
	BHKR: Cornell	South Africa (Table 1)	South Africa, under 30 only (Table 10)
SWB question	(i) In the few minutes immediately after making the choice, which option do you think would make you feel better in terms of your own happiness? (ii) Taking all things together, which option do you think would make your life as a whole better in terms of your own happiness?	Between these two options, in the few minutes immediately after making the choice, which option do you think would make you feel better in terms of your own happiness?	
Indifference allowed	yes	yes	yes
Number of scenarios	9	7	7
Number of observations	333-409	921-953	109-114
Frequency of reversals (%)	16-38	10-16	11-17
Average frequency of reversals (%)	23	13	14
Average frequency of reversals without Interest vs. Career (%)	21	-	-
Average frequency of reversals including Apple vs. Orange (%)	22	13	15

Notes: BHKR's Cornell study summarized based on Table 2 in BHKR (2012). Number of observations and Frequency of reversals are per scenario. Interest vs. Career is the scenario in BHKR yielding the largest fraction of reversals.

Determinants of choice. In everyday life, people's choices are more likely to maximize their subjective well-being when other goals are not in conflict with it. Therefore, to the extent that our findings generalize to a sufficiently large set of actual choices faced in everyday life, we expect people in South Africa to exhibit higher levels of happiness than in the US. We can test for this directly using the BHKR data and our study. In both surveys respondents were asked, separately from the choice scenarios, to rate their actual level of happiness, as well as how they felt in terms of their other goals.[4] Table 8 presents the average ratings in the South African and US samples on a 1-10 scale (1=bad, 10=good). As can be seen, in spite of their very different circumstances, people in South Africa report significantly higher

[4] "Thinking about how you felt today, how would you rate ... your own happiness / your family's happiness / etc."

Figure 4: Number of reversals across respondents



Notes: The graph shows the histogram of the number of scenarios for which a respondent exhibited a choice-SWB reversal.

levels of subjective well-being ("Own happiness"). This makes sense if, compared to the US, trade-offs between the various life goals in this population are less of a constraint to the maximization of subjective well-being.[5]

Heterogeneity. As already mentioned above, both in BHKR and our study SWB seems to be a stronger determinant of choices in scenarios that are closest to decisions respondents are likely to actually face. In terms of heterogeneity across individuals, BHKR do not find individual characteristics to be important determinants of reversals, with the exception that black respondents in the Cornell sample are significantly more likely to exhibit reversals. By contrast, in Table 4 we found several characteristics that were associated with reversals. However, these findings are not easily comparable because (i) our sample has no variation in respondents' race (everyone is black), and (ii) BHKR's regressions do not include some of the characteristics which we found to be significant (marital status and number of children).

4.3 Denver and CNSS studies

As discussed above, BHKR's Denver and CNSS studies have fewer elements in common with our design. One potentially important difference is that the happiness question in these samples did not allow respondents to indicate indifference. Thus, in these studies indifferent respondents were forced to indicate either a choice-SWB reversal or a concordance (or say that they don't know or leave the question blank). To obtain at least suggestive comparisons, we also included a happiness question without the indifference option in our survey. As in the

[5] A possible alternative explanation is that the interpretation of the grading scale was different in the two samples.

Table 8: How respondents currently feel about their various life goals in South Africa vs. the US

	South Africa		Cornell		Difference
	N	Mean	N	Mean	p-value
Own happniess	961	8.414	415	7.636	0.0000
		(0.062)		(0.073)	
Family happiness	961	7.946	415	7.455	0.0000
		(0.068)		(0.082)	
Health	961	7.580	414	7.860	0.0220
		(0.072)		(0.083)	
Life's level of romance	961	7.006	415	6.101	0.0000
		(0.079)		(0.124)	
Social life	961	7.061	414	7.292	0.0572
		(0.070)		(0.087)	
Control over your life	961	7.532	414	7.254	0.0198
		(0.068)		(0.088)	
Life's level of spirituality	961	7.615	413	6.015	0.0000
		(0.068)		(0.118)	
Life's level of fun	961	7.010	413	7.249	0.0534
		(0.072)		(0.087)	
Social status	961	7.066	414	7.072	0.9624
		(0.075)		(0.085)	
Life's nonboringness	962	7.058	414	7.147	0.5019
		(0.078)		(0.091)	
Physical comfort	962	7.707	413	7.659	0.6882
		(0.071)		(0.077)	
Sense of purpose	961	8.301	415	7.520	0.0000
		(0.066)		(0.090)	

Notes: Each goal was rated on a 10 point scale. The first two columns refer to our South African data, the following two to the comparable US survey in BHKR (Cornell sample). The US data is available at http://dx.doi.org/10.1257/aer.102.5.2083. Standard errors in parentheses. The last column is the p-value for the equality-of-means t-test.

Denver and CNSS studies, this was included as a stand-alone question not grouped together with the other 11 life goals. Responses were on a 6-point scale which we transform to a binary scale as above.[6]

Our findings for this question are in Table 9. Compared to the results in Table 1 in the paper where indifference was allowed, we now find more concordance in every scenario. The average concordance is 93 percent with a range of 90-94 percent across scenarios. This mirrors BHKR's findings, who see more concordance in the Denver and CNSS studies than in the Cornell sample where indifference was allowed. Our findings suggest that removing the indifference option in the happiness question may force some respondents to indicate concordance.

[6] This is the same scale that was used in the Denver study. In the CNSS study, the scale was binary.

Table 9: Choice and SWB responses across scenarios, stand-alone SWB question

Choice scenario	Job with more sleep v more income %	Community work v spend money %	Live close to friends v more income %	Attend social event v save money %	Nice meal v pay off debt %	Less money now v more money later %	More absolute income v more relative income %	Apple v orange %
Higher SWB: Option 1 Chosen: Option 1	18.42	56.22	17.08	43.01	31.01	67.22	71.55	52.29
Higher SWB: Option 2 Chosen: Option 2	76.69	35.37	78.02	48.6	60.25	27.16	22.95	37.73
Higher SWB: Option 2 Chosen: Option 1	4.16	4.88	3.96	6.01	6.87	4.68	4.47	7.59
Higher SWB: Option 1 Chosen: Option 2	0.73	3.53	0.94	2.38	1.87	0.94	1.04	2.39
p-value of Liddell Exact Test	0.0000	0.1821	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000
N	961	964	960	965	961	961	963	962

Notes: The table presents the distribution of choice and SWB responses on a binary scale using the stand-alone SWB question. Responses were on a 6-point scale with no allowance for indifference. The Liddell test tests the hypothesis that the average choice response is equal to the average SWB response for paired data.

The comparison with the Denver and CNSS studies is summarized in Tables 10 and 11. Comparing the Denver and CNSS results to our no-indifference results, we again find more concordance in the South African sample. Combining all treatments in the Denver study, the average choice-SWB concordance was 85 percent (calculated from BHKR, Table 2).[7] The CNSS study included a single scenario (Sleep vs. Income), with a concordance of 92 percent. In our sample, the concordance for this scenario was 95 percent - a small, but statistically significant difference. Qualitatively, these results show a similar pattern to the Cornell study: respondents in our survey appear to choose what makes them happy more often than they did in BHKR.

Table 10: Comparison with BHKR's Denver study

	BHKR: Denver	South Africa (Table 11)
SWB question	(i) Which do you think would make you more satisfied with life, all things considered? (ii) Taking all things together, which do you think would give you a happier life as a whole? (iii) During a typical week, which do you think would make you feel happier?	Which do you think would make you feel happier?
Indifference allowed	No	No
Number of scenarios	6	7
Number of observations	420-425	961-965
Frequency of reversals (%)	10-19	5-9
Average frequency of reversals (%)	15	7
Average frequency of reversals including Apple vs. Orange (%)	-	7
Average frequency of reversals excluding life satisfaction question (%)	17	-

Notes: BHKR's Denver study summarized based on Table 2 in BHKR (2012). Number of observations and Frequency of reversals are per scenario. The last row reports average reversals in the Denver study excluding respondents who were asked the first version of the SWB question.

[7]Recall that the Denver study includes a life satisfaction question which BHKR found to yield significantly more concordance than the felt happiness question. Excluding the life satisfaction question yields 83% concordance in the Denver sample (calculated from BHKR's data posted at http://dx.doi.org/10.1257/aer.102.5.2083).

Table 11: Comparison with BHKR's CNSS study

	BHKR: CNSS	South Africa (Table 11, column 1)
SWB question	Which do you think would give you a happier life as a whole?	Which do you think would make you feel happier?
Indifference allowed	No	No
Number of scenarios	1 (Sleep vs. income)	1 (Sleep vs. income)
Number of observations	972	961
Frequency of reversals (%)	8	5
p-value for equal reversals		0.01

Notes: BHKR's CNSS study summarized based on Table 2 in BHKR (2012). The last row reports a t-test for the hypothesis that the frequency of reversals in the two studies is the same.

5 Robustness

Following BHKR, we checked the robustness of our findings to three types of questionnaire effects (cf. BHKR, Section IV). First, as in BHKR's Denver study, we wanted to check whether respondent fatigue may have resulted in scenario-order effects. To this end, we reversed the order of the scenarios and checked whether choices were affected (Table 12). We find that average choices in the reversed questionnaires are not statistically different for 7 out of the 8 scenarios, whether we measure choice on a binary scale or on the 6 point scale. We can also compare respondents' choices for scenarios that were asked in the first half of the survey vs. for scenarios asked later. We find a small tendency for respondents to favor option 2 more for scenarios asked later: 50% vs. 53% ($p = 0.06$). We find a similar tendency for SWB (55% vs. 57%) but this difference is not statistically significant ($p = 0.21$). Overall these order effects are even smaller than those found in BHKR, perhaps reflecting the fact that respondent fatigue was less prevalent in our surveyor-administered surveys. Like in BHKR, order effects did not affect the frequency of choice-SWB reversals: we find reversals in 8% of cases regardless of scenario order ($p = 0.91$).

Table 12: Robustness: Choices with reordered scenarios

Scenario	Average choice (binary)		Difference p-value	Average choice (6-point)		Difference p-value
	All	Scenarios reordered		All	Scenarios reordered	
Job with more sleep v more income	1.77	1.77	0.95	4.73	4.84	0.39
Community work v spend money	1.39	1.46	0.03	3.20	3.46	0.06
Live close to friends v more income	1.79	1.77	0.49	4.81	4.79	0.86
Attend social event v save money	1.51	1.49	0.50	3.63	3.59	0.80
Nice meal v pay off debt	1.62	1.62	0.92	4.04	4.04	1.00
Less money now v more money later	1.28	1.25	0.31	2.46	2.33	0.32
More absolute income v more relative income	1.24	1.21	0.33	2.43	2.28	0.26
Apple v orange	1.40	1.37	0.44	3.14	3.07	0.64

Notes: For each scenario, the table displays the average responses to the choice questions for all observations as well as for observations where the order of the scenarios was reversed. The p-value is for the equality-of-means t-test.

Table 13: Robustness: Regressions of choice on SWB and other goals, with goals reordered

	(1)	(2)	(3)
Own happniess	0.501***		0.165***
	(0.015)		(0.053)
Family happiness		0.177***	0.107**
		(0.046)	(0.054)
Health		0.078*	0.040
		(0.046)	(0.046)
Life's level of romance		0.037	0.019
		(0.046)	(0.047)
Social life		0.026	0.011
		(0.045)	(0.045)
Control over your life		-0.013	-0.027
		(0.040)	(0.040)
Life's level of spirituality		-0.055	-0.054
		(0.039)	(0.038)
Life's level of fun		0.027	0.023
		(0.043)	(0.042)
Social status		0.095**	0.080*
		(0.045)	(0.047)
Life's nonboringness		-0.190***	-0.190***
		(0.041)	(0.041)
Physical comfort		0.006	0.020
		(0.054)	(0.054)
Sense of purpose		0.359***	0.341***
		(0.045)	(0.045)
Observations	1886	1886	1886
R^2	0.3987	0.4547	0.4594

Notes: OLS regressions for observations where the presentation of the various life goals was reversed for each scenario. The dependent variable is choice on a 6-point scale, all independent variables are on a 7-point scale. Variables are demeaned at the scenario level. Robust standard errors in parentheses. ***, **, * denote significance at the 1, 5, and 10 percent, respectively.

Table 14: Robustness: Choices with reordered choice and SWB questions

Scenario	Average choice (binary)		Difference p-value	Average choice (6-point)		Difference p-value
	All	SWB before choice		All	SWB before choice	
Job with more sleep v more income	1.77	1.80	0.37	4.73	4.63	0.40
Community work v spend money	1.39	1.39	0.95	3.20	3.13	0.63
Live close to friends v more income	1.79	1.85	0.05	4.81	4.89	0.52
Attend social event v save money	1.51	1.49	0.54	3.63	3.40	0.11
Nice meal v pay off debt	1.62	1.67	0.15	4.04	4.12	0.58
Less money now v more money later	1.28	1.29	0.90	2.46	2.41	0.71
More absolute income v more relative income	1.24	1.24	0.98	2.43	2.29	0.29
Apple v orange	1.40	1.42	0.53	3.14	3.10	0.77

Notes: For each scenario, the table displays the average responses to the choice questions for all observations as well as for observations where the stand-alone SWB question was asked first. The p-value is for the equality-of-means t-test.

Second, in one version of the questionnaire we reversed the presentation of the various life goals, so that the own happiness question came last. This is to make sure that life goals introduced earlier were not mechanically more correlated with choices. Regressing choice on happiness and the 11 other life goals for these observations yields similar results to those seen above (Table 13). Own happiness is highly correlated with choice when entered on its own, but its coefficient drops dramatically without a large change in the R^2 of the regression when the other variables are entered as well. This again indicates a strong correlation between the respondents' various life goals in this sample. Like BHKR, we do see a change in the magnitude of some of the individual coefficients depending on the order in which life goals were listed. However, this does not tend to affect which life goals are statistically significant in explaining choices.

Finally, in one version of the questionnaire, we asked the stand-alone SWB question before the choice question. Thus, we prompted respondents to think about happiness before thinking about choice. We wanted to know if this could affect how respondents would choose and whether they would exhibit a choice-SWB reversals. We did not find this to be the case (Table 14). In most cases, the fraction of respondents choosing one option over the other did not change by more than one or two percentage points when the SWB question was asked first. We only find a statistically significant difference in 1 out of 8 scenarios.[8] Similarly, there was no significant difference in the average number of reversals exhibited by a respondent.[9]

[8] For the Nice meal v pay off debt scenario the 5 percentage point difference in the fraction of responses is only marginally insignificant, with a p-value of 0.15.

[9] BHKR perform this robustness check in their Cornell study where the SWB response scale includes the indifference option. Since our stand-alone SWB question did not include indifference, the two robustness checks are not directly comparable. In general, neither BHKR nor we find evidence that asking about SWB before or after asking about choice has large effects on the results.

6 Discussion

A possible interpretation of our findings is suggested by the literature on hedonic adaptation (Frederick and Loewenstein, 1999; Loewenstein and Ubel, 2008). It is well documented that people's hedonic experiences adapt to changing life circumstances, such as increased income or disability. Some of this adaptation is passive, embodied in the basis of comparison (as when the sick experience life's "little pleasures" more intensively than the healthy). However, adaptation can also be active, embodied in the choices that people make. For example, time-use studies show that one's circumstances affect day-to-day activities and the resulting flow of happy experiences (Krueger et al., 2009; Knabe et al., 2009).[10] Development economists have also noted that such adaptation may be important:

> "These three men all lived in small houses without water or sanitation. They struggled to find work, and to give their children a good education. But they all had a television, a parabolic antenna, a DVD player, and a cell phone. Generally, it is clear that things that make life less boring are a priority for the poor." (Banerjee and Duflo, 2011, p36).

The pronounced happiness-seeking behavior we observe in the South African sample may reflect adaptation to life among the poor. The lack of ample resources to improve one's life may be compensated, to some extent, by attaching a higher weight to happiness in decision making.

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[10] Similarly, Maslow's (1943) concept of a hierarchy of needs would suggest that the goals people seek adapt to their circumstances, with higher level goals (e.g., self-fulfilment) becoming more desirable as lower level goals (e.g., physical safety) are attained.

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