

---

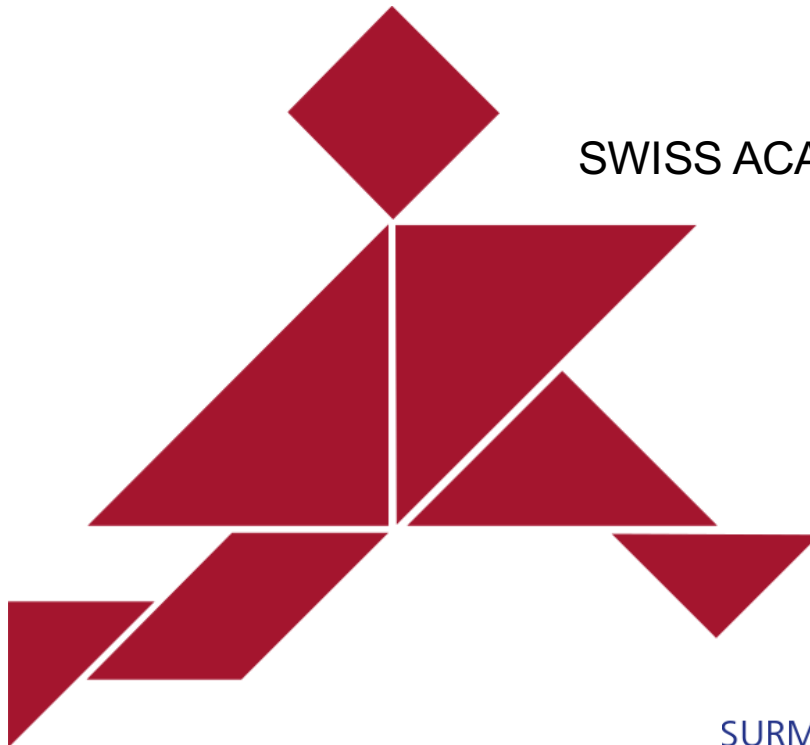
# MEASURING QUALITY OF LIFE IN OLD AGE USING LARGE SURVEYS

---

**MATTHIAS KLIEGEL, MICHEL ORIS,  
ANDREAS IHLE, MARIE BAERISWYL**

SWISS ACADEMY OF HUMANITIES AND SOCIAL SCIENCES  
WORKSHOP SERIES QUALITY OF LIFE

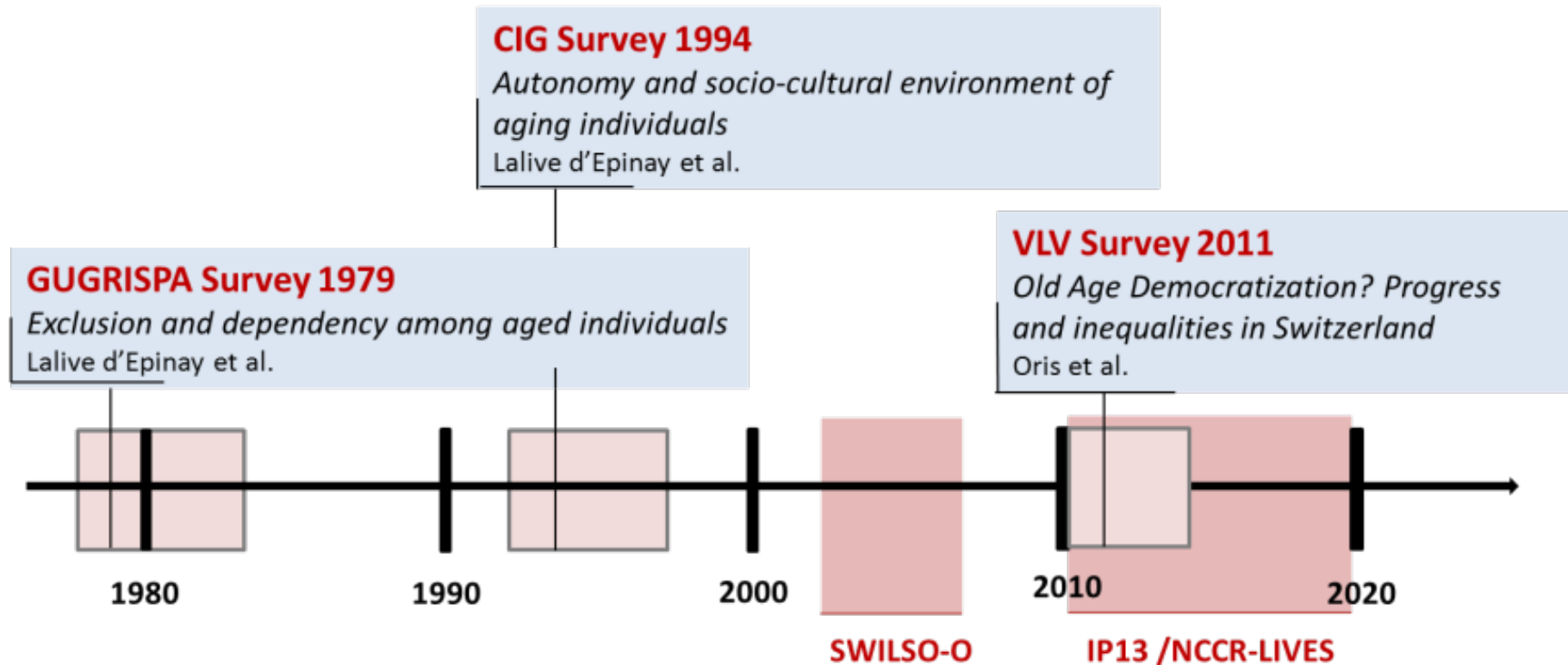
GENEVA, SEPTEMBER 12, 2016



SURMONTER LA VULNÉRABILITÉ: PERSPECTIVE DU PARCOURS DE VIE

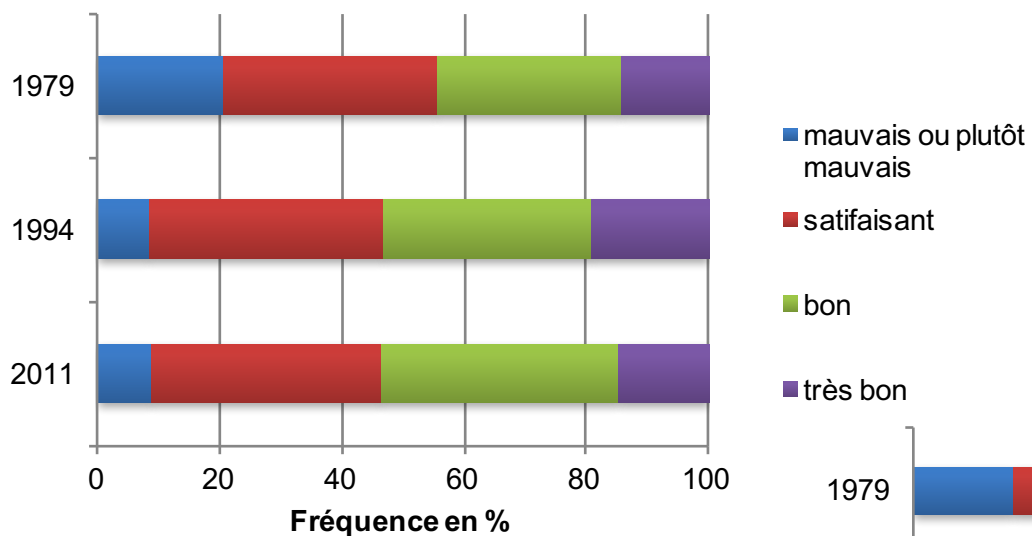
---

# THREE WAVES IN A CHANGING WORLD

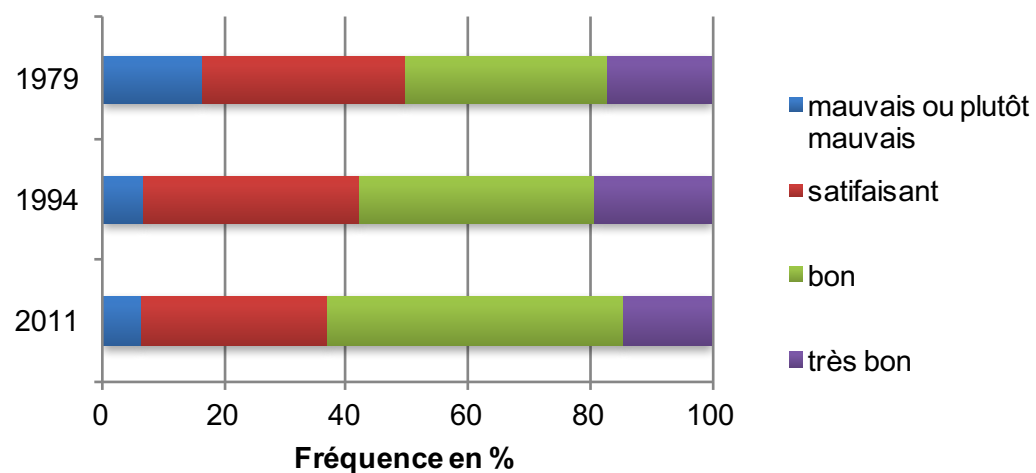


# EVOLUTION OF RESOURCES: HEALTH – SUBJECTIVE HEALTH

## Women

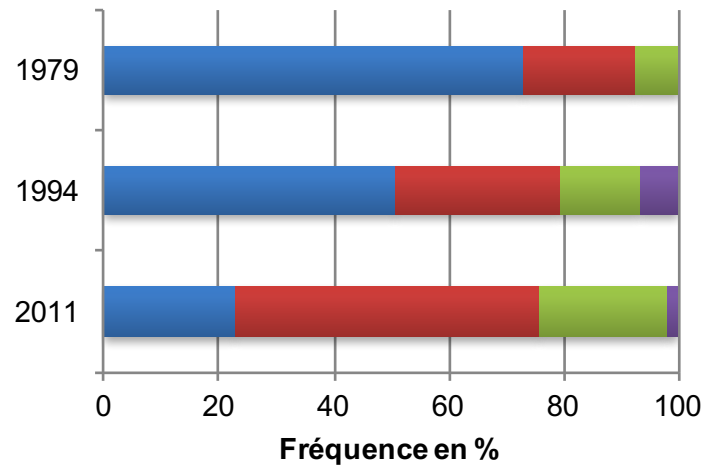


## Men

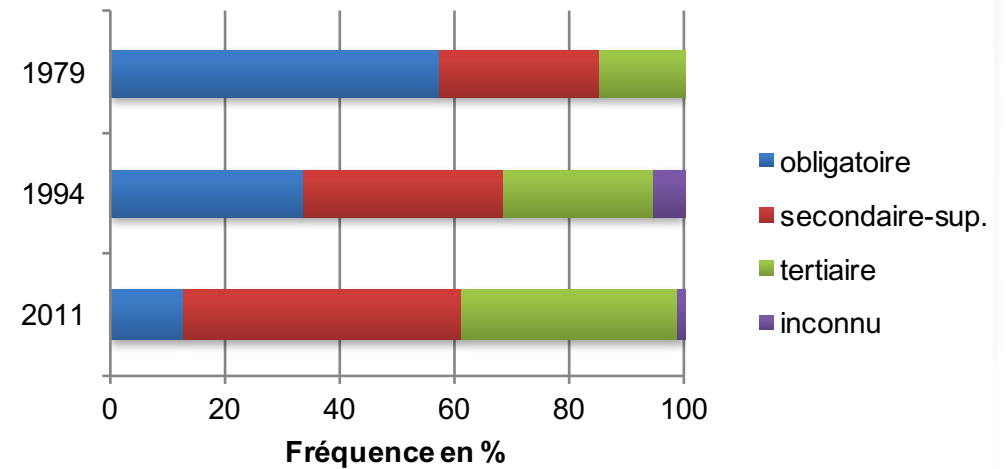


# EVOLUTION OF RESOURCES: LEVEL OF EDUCATION

## Women



## Men



# THE VLV SURVEY

## The main sample

3600 respondents stratified  
by age and sexe

Including 500 respondents  
with dementia

Proxy questionnaire

5 regions



Sample distribution of the VLV survey, without proxy data

age groups	Geneva		Valais		Berne		Basel		Ticino		Total
	women	men	women	men	women	men	women	men	women	men	
65 - 69	58	58	58	59	62	70	67	67	58	56	613
70 - 74	56	54	58	59	65	62	57	59	57	67	594
75 - 79	58	55	50	60	63	65	57	57	55	52	572
80 - 84	43	49	45	51	54	60	56	49	43	49	499
85 - 89	44	45	35	43	49	58	40	44	44	49	451
90 +	23	35	28	30	37	39	31	52	34	42	351
<b>Total</b>	<b>282</b>	<b>296</b>	<b>274</b>	<b>302</b>	<b>330</b>	<b>354</b>	<b>308</b>	<b>328</b>	<b>291</b>	<b>315</b>	<b>3080</b>

# A TOOL: THE LIFE CALENDARS

■ The life calendars and its five trajectories

- Residential
- Family life
- Professional life
- Health
- Nationality (migration)

Année	Age	Résidence	Famille / couple	Activité	Taux	Santé	Nationalité	Age	Année
1925	0	Evotène VS					Suisse	0	1925
1926	1							1	1926
1927	2		Naiss. soeur					2	1927
1928	3							3	1928
1929	4							4	1929
1930	5		Naiss. frère					5	1930
1931	6							6	1931
1932	7		Naiss. soeur	Ecole primaire				7	1932
1933	8							8	1933
1934	9							9	1934
1935	10							10	1935
1936	11							11	1936
1937	12			Ecole ménagère				12	1937
1938	13							13	1938
1939	14			Aide à la ferme				14	1939
1940	15							15	1940
1941	16	Zermatt VS		Femme de ménage	100			16	1941
1942	17							17	1942
1943	18		Rencontre Henri					18	1943
1944	19							19	1944
1945	20							20	1945
1946	21	Nendaz VS	Mariage	Foyer				21	1946
1947	22		Naiss. Paul					22	1947
1948	23							23	1948
1949	24		Naiss. Anne					24	1949
1950	25							25	1950
1951	26							26	1951
1952	27							27	1952
1953	28		Naiss. Gabriel					28	1953
1954	29		Naiss. Emile					29	1954
1955	30							30	1955
1956	31							31	1956
1957	32							32	1957
1958	33							33	1958
1959	34		Naiss. Yvonne					34	1959
1960	35							35	1960
1961	36							36	1961
1962	37							37	1962
1963	38							38	1963
1964	39							39	1964
1965	40			Secrétaire	50			40	1965
1966	41							41	1966
1967	42							42	1967
1968	43							43	1968
1969	44							44	1969
1970	45		Décès père					45	1970
1971	46							46	1971
1972	47				30	Cancer du sein		47	1972
1973	48		Décès belle-mère					48	1973
1974	49							49	1974
1975	50		Décès mère					50	1975
1976	51				50			51	1976
1977	52							52	1977
1978	53		Grand-mère					53	1978
1979	54							54	1979
1980	55							55	1980
1981	56							56	1981
1982	57							57	1982
1983	58							58	1983
1984	59							59	1984
1985	60							60	1985
1986	61							61	1986
1987	62			Retraite				62	1987
1988	63							63	1988
1989	64							64	1989
1990	65						Accident de voiture	65	1990
1991	66							66	1991
1992	67							67	1992
1993	68		Décès frère					68	1993
1994	69							69	1994
1995	70							70	1995
1996	71							71	1996
1997	72							72	1997
1998	73							73	1998
1999	74		Décès Henri			Opération du coeur		74	1999
2000	75	Sion						75	2000
2001	76							76	2001
2002	77							77	2002
2003	78							78	2003
2004	79							79	2004
2005	80		Rencontre Stefano					80	2005
2006	81							81	2006
2007	82							82	2007
2008	83							83	2008
2009	84	EMS Sion VS				Fracture col du fémur		84	2009
2010	85							85	2010
2011	86							86	2011

# DIFFERENT INDICATORS TO DISENTANGLE WELL-BEING

■ Convergence in psychology, sociology and economy towards a triple perspective:

■ objective

■ subjective

■ cognitive

■ affective

■ relative

■ Satisfaction with Life Scale (Diener et al., 1985)

■ In most ways my life is close to my ideal.

■ The conditions of my life are excellent.

■ I am satisfied with my life.

■ So far I have gotten the important things I want in life.

■ If I could live my life over, I would change almost nothing.

■ Rating: 7-point Likert-type scale ('strongly disagree') -3 -2 -1 0 +1 +2 +3 ('strongly agree')

# SOCIAL INEQUALITIES IN LIFE SATISFACTION...

- People with a low education have a lower life satisfaction

Variable	Model de base	Model A	Model B
<b>Men</b>	1.04***	1.03***	1.02***
<b>canton (ref. BE)</b>			
GE	0.98	0.99	0.99
VS	1.01	1.02	1.00
Bâle	1.01	1.01	1.02
TE	0.98	1.00	1.00
<b>age (ref. 65-70)</b>			
70-74	0.98	0.99	1.00
75-79	0.97**	0.98	0.99
80-84	0.98	0.99	1.00
85-89	0.97**	0.98	1.00
90-94	0.98	0.99	1.00
<b>Swiss origin</b>		1.07***	1.05***
<b>Education (ref. compulsory)</b>		***	***
secondary		1.03**	1.02*
tertiary		1.07***	1.05***
<b>Personality</b>			
extraversion			1.01***
agreeability			1.01***
conscientiousness			1.01***
neuroticism			0.98***
openness			1.00



# ... AND THE CONSTRUCTION OF THOSE INEQUALITIES ACROSS THE LIFE COURSE

- People with a low education have a lower life satisfactions
- Impact of individual trajectories: accumulation and critical events
  - Hard job
  - Events of couple separation

Variable	Model A	Model C
men	1.03***	1.02*
canton (ref. BE)		
GE	0.99	0.99
VS	1.02	1.02
Bâle	1.01	1.01
TE	1.00	0.98
age (ref. 65-70)		
70-74	0.99	0.99
75-79	0.98	0.97**
80-84	0.99	0.99
85-89	0.98	0.98
90-94	0.99	0.99
Swiss origin	1.07***	1.06***
education (ref. compulsory)	***	***
secondary	1.03**	1.03*
tertiary	1.07***	1.06***
professional trajectories (ref. full employment)		
quasi full employment		0.98*
start and stop		0.98
stop and back		0.98
hard job		0.96***
widowhood		0.96***
couple separation		0.94***

# TRAJECTORIES, “PRODUCTS” OF LIFE AND LIFE SATISFACTION ...

- People with a low education have a lower life satisfactions
- Impact of individual trajectories: accumulation and critical events
  - Hard job
  - Events of couple separation
- Current resources between stratification, trajectories and satisfaction:
  - Functional and psychic health status
  - Economic status
  - Household composition
  - ... mediate the effects of trajectories and partially the « initial » effects
  - ... the oldest old have an highest tendency to participate

<b>canton (ref. BE)</b>		
GE	0.99	1.01
VS	1.02	1.03***
Bâle	1.01	1.01
TE	0.98	1.01
<b>age (ref. 65-70)</b>		
70-74	0.99	0.99
75-79	0.97**	1.00
80-84	0.99	1.02*
85-89	0.98	1.03
90 et +	0.99	1.05**
<b>Swiss origin</b>		
education (ref. compulsory)	***	**
secondary	1.03*	1.01
tertiary	1.06***	1.03*
<b>professional trajectories (ref. full employment)</b>		
quasi full employment	0.98*	0.99
start and stop	0.98	0.99
stop and back	0.98	0.98
hard job	0.96***	0.99
widowhood	0.96***	1.02
couple separation	0.94***	0.98
<b>frailty score</b>		
depression score (11)		0.98***
income status (ref. secure)		0.96***
unknown		***
poor		0.98
precariousness		0.93***
<b>household (ref. Live alone)</b>		
married		0.98*
cohabitant (non-married)		***
offspring (ref. without)		1.09***
living children		1.01
grand-children		0.98
close friend		1.01

## ... THE IMPORTANCE OF SOCIAL PARTICIPATION

- People with a low education have a lower life satisfactions
- Impact of individual trajectories: accumulation and critical events
  - Hard job
  - Events of couple separation
- Current resources between stratification, trajectories and satisfaction:
  - Functional and psychic health status
  - Economic status
  - Household composition
  - ... mediate the effects of trajectories and partially the « initial » effects
  - ... the oldest old have an highest tendency to participate
- Active participation to various social circles and life satisfaction
  - Engagement in association(s)
  - Religious participation
  - Family sociability

Variable	model E	model F
	-	...
<b>Associations (ref. Non-member)</b>	***	**
<b>Member</b>	1.02	1.01
<b>Active member</b>	1.06***	1.03**
<b>Benevolent</b>	1.01	1.00
<b>Spectacle</b>	1.02*	1.00
<b>Classes</b>	0.98	0.98*
<b>Café</b>	1.01	0.98
<b>Political manifestation</b>	1.01	1.01
<b>Visiting family</b>	1.05***	1.04***
<b>Visiting friends</b>	1.03**	1.02
<b>Church</b>	1.02*	1.02**
<b>Helping family</b>	1.02**	1.01
<b>Helping friends</b>	1.00	0.99

# MAIN RESULTS: THE SOCIAL CHALLENGES OF LIFE SATISFACTION

---

## ■ First results....:

- From objective conditions to subjective well-being!
- Age paradox... maybe not so paradoxical?

## ■ ... to be completed with:

- To better identify the mediation and moderation effects in the system that appeared
- Participation as resources for the less doted in capitals?
- Questioning the interactions between various indicators of satisfaction and gender, respectively age

# WELL-BEING – QUALITY OF LIFE – HAPPINESS AN HISTORICAL EPISODE?

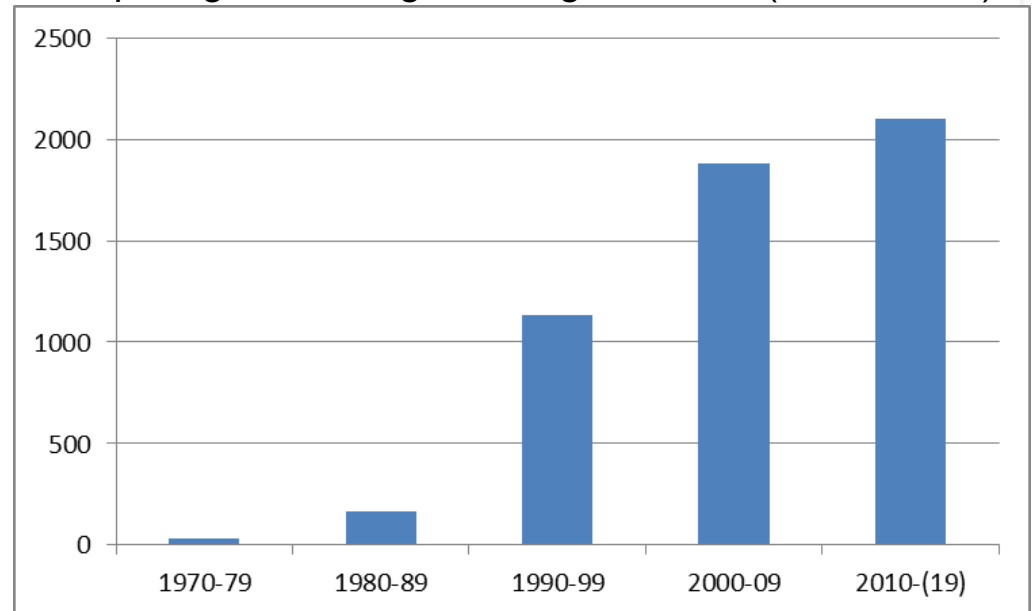
“Well-being as a personal objective has not an absolute value. Collinet and Delalandre (2014) show how well-being became a political objective in the second half of the 20th century, then how well-being as self-realization has emerged in the 1990s. The capacity to remain active then becomes the condition of this well-being.”

(Baeriswyl, 2016, 273-274)

“Honneth (2004) shows how the major socio-cultural changes that include a more wealthy society and a trend to individualization at the end imply a new normative figure, the responsible and autonomous individual”

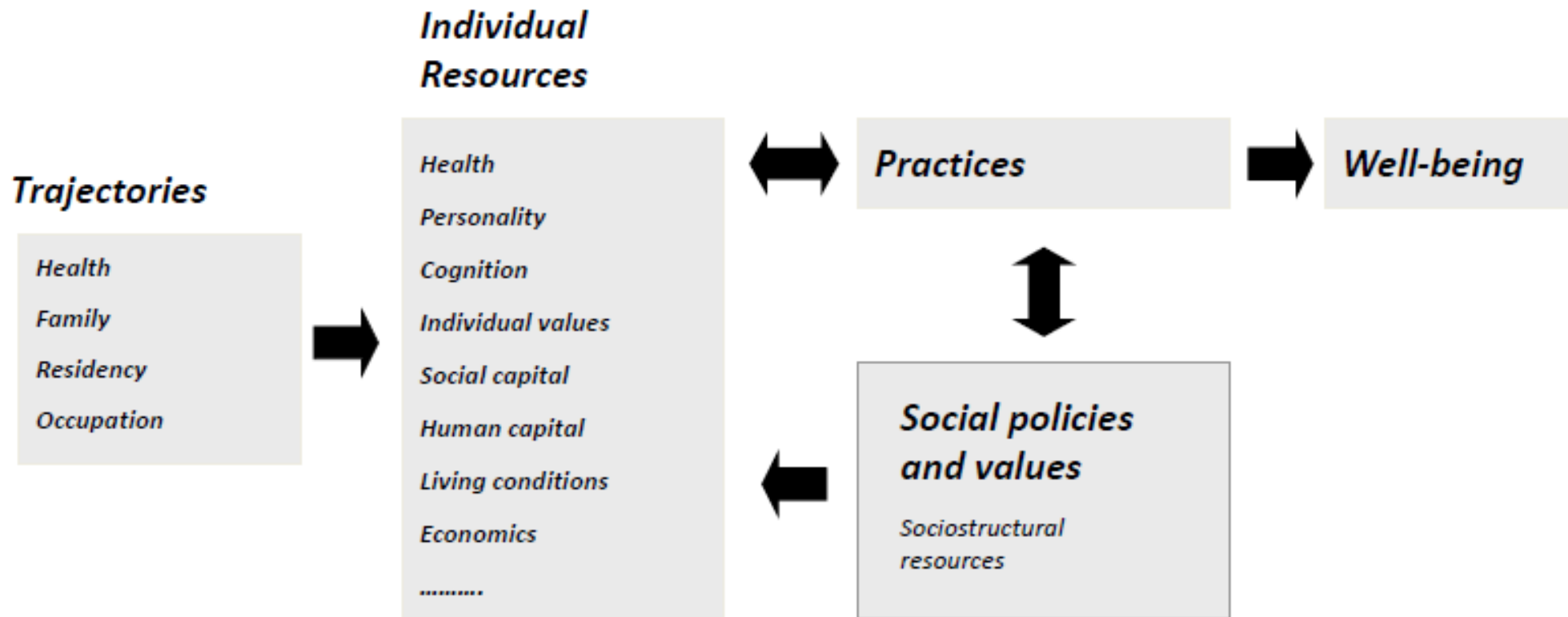
(Baeriswyl, 2016, 274)

Spelling ‘well-being’ in Google Scholar (in thousand)



Social inequalities – Adaptive preferences

# Theoretical model of VLV cooperative research



# CONFRONTING THE MEASURES OF LOW ECONOMIC WELL-BEING

Figure 1 The substance level of three measurement angles of economic vulnerability (EV)

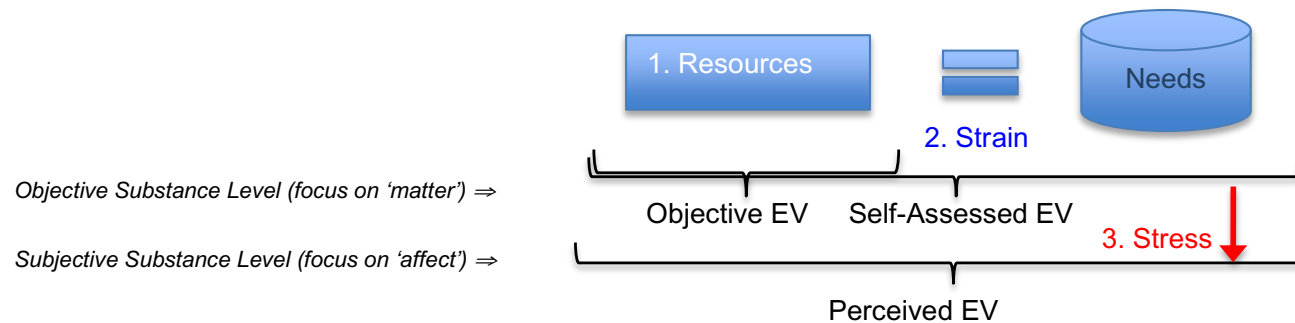
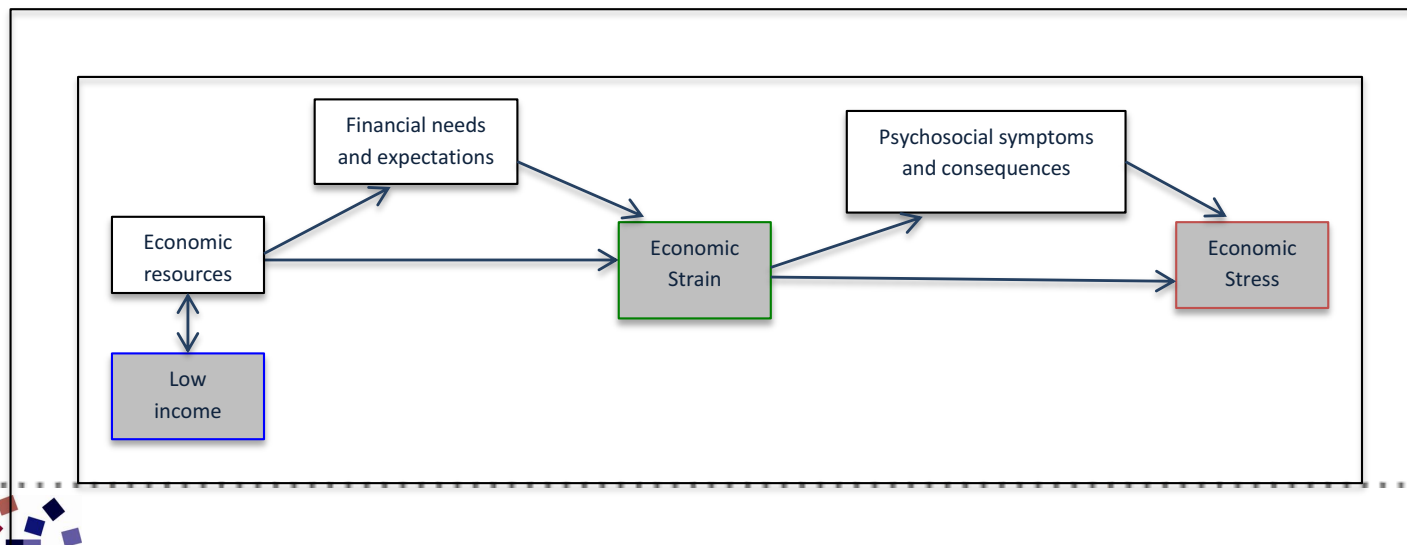


Figure 1 Model for measuring economic vulnerability in a triangular approach



---

**THE ROLE OF LEISURE ACTIVITIES IN MEDIATING  
THE RELATIONSHIP BETWEEN PHYSICAL HEALTH  
AND QUALITY OF LIFE  
IN OLD AND VERY OLD AGE:**

**CONCEPTUAL DIFFERENCES IN MEASURES  
MAKE A DIFFERENCE IN OUTCOME!**



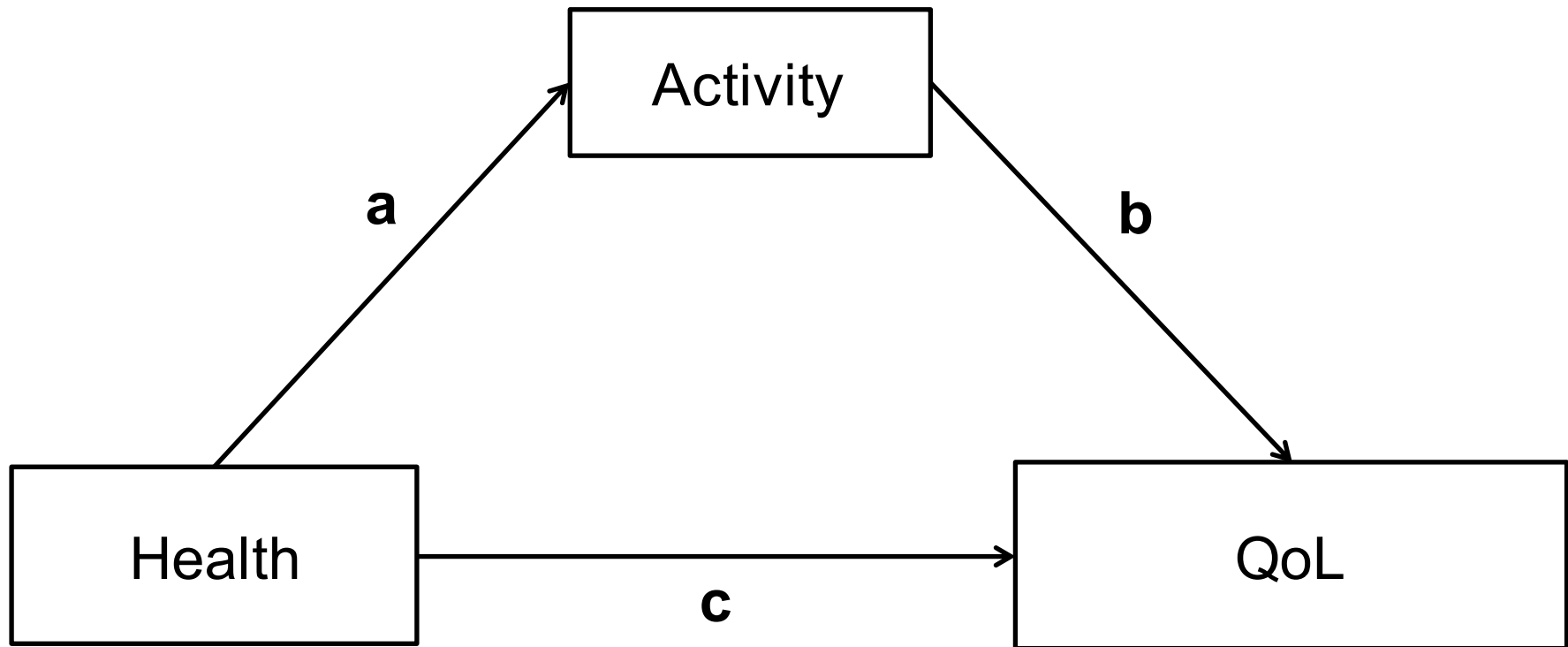
# MEDIATION OF THE RELATIONSHIP BETWEEN PHYSICAL HEALTH AND QOL

---

- One of strongest predictors of QoL in old age is physical health (Gouveia et al., 2016; Westaway, 2010) – BUT:
  - *Mediation / moderation hypothesis:*
    - Relation of physical health to QoL is mediated / moderated by a number of factors; here: mediated via active lifestyle / participation / agency (Paggi et al., 2016)
    - In line with evidence that health limitations in old age are related to reduced participation in physical, intellectual, and social activities (Ashe et al., 2009; Lawton et al., 2002; Moschny et al., 2011)
    - In line with evidence that reduced participation in a variety of activities is related to lower QoL in old age (Cedervall et al., 2015; Kahana et al., 2013; Ku et al., 2016)
-

# MEDIATION OF THE RELATIONSHIP BETWEEN PHYSICAL HEALTH AND QOL

---



# MEDIATION OF THE RELATIONSHIP BETWEEN PHYSICAL HEALTH AND QOL

---

*Methodological question:*

■ *Does this depend on the type of QoL indicator used?*

■ QoL:

■ heterogeneous construct

■ different aspects/sub-dimensions:

■ symptom-specific QoL

■ Global evaluation of QoL

## DIFFERENT QOL INDICATORS

---

- Symptom-specific QoL: e.g. EuroQoL questionnaire (EuroQoL Group, 1990)
  - mobility (i.e., walk)
  - self-care (e.g., have a wash, dress)
  - usual activities (e.g., housework, family/leisure activities)
  - pain / discomfort
  - anxiety / depression
  
- Rating: 1 ('extreme problem') - 2 ('moderate problem') - 3 ('no problem')

## DIFFERENT QOL INDICATORS

---

- Global subjective evaluation of QoL: e.g. Satisfaction with Life Scale (Diener et al., 1985)

- In most ways my life is close to my ideal.
- The conditions of my life are excellent.
- I am satisfied with my life.
- So far I have gotten the important things I want in life.
- If I could live my life over, I would change almost nothing.

- Rating: 7-point Likert-type scale

(‘strongly disagree’) -3 -2 -1 0 +1 +2 +3 (‘strongly agree’)

---

## STUDY GOAL 1

---

- Does the mediation of the relation of physical health to global evaluation of QoL (using Satisfaction with Life Scale) via leisure activities observed by Paggi et al. (2016) transfer to symptom-specific QoL (using EuroQoL)?

## METHODS - VLV DATA

---

- **Participants:** 3080 individuals (mean age = 78.4 years,  $SD = 8.4$ , range 65-101) → details Michel Oris' presentation
  
  - **Materials:**
    - *QoL*
      - Symptom-specific QoL (EuroQoL questionnaire; EuroQoL Group, 1990)
      - Global evaluation of QoL (Satisfaction with Life Scale; Diener et al., 1985)
    - *Physical health*
      - Health restrictions (number of diseases)
      - Subjective general health status (rating 0-100)
      - Subjective evaluation of change in health (over past 10 years)
    - *Leisure activities*
      - Averaged frequency scores across 18 leisure activities within the last months
-

## RESULTS - STUDY GOAL 1

---

- Frequency of activity participation significantly mediated the relation of physical health to *symptom-specific QoL*:
  - health restrictions (19.2% exerted indirectly,  $\beta = -.08$ ,  $p < .001$ )
  - subjective health status (18.6% exerted indirectly,  $\beta = .09$ ,  $p < .001$ )
  - change in health (22.6% exerted indirectly,  $\beta = .09$ ,  $p < .001$ )
- Frequency of activity participation significantly mediated the relation of physical health to *global evaluation of QoL*:
  - health restrictions (13.0% exerted indirectly,  $\beta = -.03$ ,  $p < .001$ )
  - subjective health status (10.9% exerted indirectly,  $\beta = .03$ ,  $p < .001$ )
  - change in health (19.4% exerted indirectly,  $\beta = .03$ ,  $p < .001$ )(Ihle et al., submitted)

➔ **Overlap of both QoL indicators**

---



# THE RELATIONSHIP BETWEEN PHYSICAL HEALTH AND QOL - MODERATED MEDIATIONS

---

*Is the mediational role of leisure activities differential?*

Individual differences: certain individuals may be particularly vulnerable because

- lower physical health
- lower activity engagement
- a stronger dependence of activity engagement on limited health
- a stronger importance of activity engagement for QoL

# THE RELATIONSHIP BETWEEN PHYSICAL HEALTH AND QOL - MODERATED MEDIATIONS (II)

---

*Is the mediational role of leisure activities differential?*

Individual differences: certain individuals may be particularly vulnerable:

- Old-old (compared to young-old) adults
- low (compared to high) general cognitive ability
- low (compared to high) educational level
- low (compared to high) number of activities
- low (compared to high) values in certain personality dimensions (e.g., openness)
- women (compared to men)

## **STUDY GOAL 2**

---

**Do mediation patterns differ between individuals in terms of a moderated mediation?**

**If so, does this depend on the type of QoL indicator used?**

## RESULTS - STUDY GOAL 2

---

The mediation of the relation of physical health to *symptom-specific QoL* via frequency of activity participation was more pronounced in

- old-old compared to young-old adults ( $p = .037$ )
- low compared to high general cognitive ability ( $p = .012$ )
- low compared to high number of activities ( $p < .001$ )
- women compared to men ( $p < .003$ )
  
- No moderated mediations regarding educational level / Big Five personality dimensions
- No moderated mediations for *global evaluation of QoL*

➔ **Differential pattern: depending on the type of QoL indicator used**

---

# MEASURING QOL IN LARGE SURVEYS

## CONCEPTUAL CONCLUSIONS

---

The present results suggest that

- (1) the mediation of the relation of physical health to global evaluation of QoL via frequency of leisure activity participation transfers to symptom-specific QoL
  - (2) this mediation may be more pronounced in certain populations
- Conceptual and applied implications:
- Intervention programs and prevention policies

# MEASURING QOL IN LARGE SURVEYS

## CONCEPTUAL CONCLUSIONS (II)

---

The present results suggest that

- (3) those differential mediation patterns may depend on the type of QoL indicator used

→ Methodological implications:

- Although there may be an overlap of different QoL indicators to some extent,
- symptom-specific QoL indicators may be more sensitive measures to capture individual difference characteristics

# OUTLOOK

---

***Much more research on construct and methods of QoL needed!***

*Some areas for the next decade:*

- Mental/physical health, comorbidities?
- Life course, major life events?
- Social network, social support?
- Emotional status, beliefs, attitudes?
- Wishes, desires, needs?
- Financial resources, assurances?
- Social policies, laws, national development?
- Past, present, future?