

# Migration and Grit

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# Why Migration and “Grit”?

- We know migration is **selective**
- Empirical work – in many settings – finds selectivity by age, sex, education, health status ...
- But is there also selectivity on characteristics that are **less obviously manifest** or **less often measured** in surveys?!
- Migrants as (alternately?)...
  - Future oriented
  - Risk-takers
  - Strivers
- In this paper, we test if “Grit” matters, *net of usual suspects*

# Thomas, D.S.T., 1938. *Research memorandum on migration differentials* (No. 43). Social Science Research Council.

*Research Memorandum on Population Redistribution within the United States.* By RUPERT B. VANCE. Bull. 42. (New York: Social Science Research Council. 1938. Pp. xi, 134. \$1.00.)

*Research Memorandum on Migration Differentials.* By DOROTHY SWAINE THOMAS and OTHERS. Bull. 43. (New York: Social Science Research Council. 1938. Pp. xii, 423.)

The appearance of these two volumes is further evidence of the tendency of internal migration—or change of residence from one community to another within the national boundaries—to replace immigration in claiming the interest of social investigators. Even before immigration restriction, internal migration was a more important fact, though lacking the dramatic qualities of immigration and presenting no such problem of effect on our institutions. For example, in the United States in 1930 there were fourteen



← The Pendulum swings.

Review by: Maurice R. Davie, *The American Economic Review* Vol. 29, No. 2 (Jun., 1939), pp. 415-417 (3 pages)

**Thomas, D.S.T., 1938. *Research memorandum on migration differentials* (No. 43). Social Science Research Council.**

Of particular interest to students of public health are the sections on physical and mental health differentials.

The findings included in the studies analyzed seem to lead to the inference that internal migrations exercise a selective influence from the point of view of health, the migrants appearing on the whole a somewhat healthier group than non-migrants. As to mental health no definite conclusions can be drawn until we get sounder definitions of mental health and comparable methods of measuring it.

← And this!....



Review by: CT Pihlblad, *American Journal of Public Health* (Jan., 1939)

# About Grit

- A non-cognitive psychological trait usually used to predict educational achievement
  - Working “strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress” (Duckworth et al., 2007)
- We expect that labor migrants are gritty
  - Leaving social support networks, and even children, behind
  - Working in jobs that are off the books and insecure
  - Treated as inferiors in places of work
  - Challenging living conditions, environments

# Goals of the Migrant Health Follow-Up Study

- Multi-year study funded by the National Institutes of Health (NIH), USA jointly led by Wits University (South Africa) and Brown University (USA)
- To improve our understanding of how migration and urbanisation impact population health (and the trade-off between the increases in socioeconomic circumstances associated with movement and the health risks that accompany that shift)
- To enhance our knowledge of population redistribution, to incorporate spatial demography into companion health investigations
- To identify circumstances where population mobility itself may compromise the continuity necessary to deliver suitable health care for chronic conditions

# Research Design

- Build on Wits Demographic Surveillance (HDSS) Scaffolding
  - [Link MHFUS Survey to this Individual, HH, & Community History](#)
- Build on Pilot Work (CFAR/NIH funded) 2012-13
  - Find migrants? -- yes
  - Use cellphone? -- yes
- MHFUS Longitudinal Study Inauguration
  - Draw simple random sample from 2016 HDSS frame of persons 18-39, N=3800
  - 2017 Initial Household Visits (Wave 0)
    - Visit Origin HH to learn sampled individual whereabouts & contact info
    - Aim to find & interview individuals wherever they are ~43% outside @Wave1
    - Follow in subsequent Waves wherever they are
- Predict Migrant Status Wave 3 (53%) as function of Grit Wave 2

# Longitudinal Data Collection HDSS “Scaffolding” + following migrants

“Wave 0” Initial Household Visits	Wave 1	Wave 2	Wave 3	Wave 4
	Face to face interview	Telephone interview	Telephone interview	Face to face interview
	Collection of biometrics	~	~	Collection of biometrics
2017	Feb’18 to Jan’19	Sep’19 to Jan’20	Late 2020 to Early 2021	Early 2022 (data collection underway now)

Waves 1 & 4 Two Teams

Agincourt  
Rural Origin

Gauteng  
Urban Destination



# Survey Content (& Wave 2 additions)

- Interviews administered on tablets using **REDCap**
- Questions Sections include:
  - Education and employment
  - Residential history
  - Remittances
  - **Transport**
  - General health (self-rate overall) & conditions
    - **Wave 2: Sleep Detail PSQ**
    - **Grit-S Module [8 qns]** ← **Grit**
    - **CESD-10**
  - Healthcare access
  - Diet and exercise
  - Tobacco and alcohol
  - Sexual partnerships/ HIV
  - **Maternity/Paternity History**
- Biometrics [**Wave 1 Only**]:
  - BP, Height & Weight (for BMI)
  - DBS (Blood Glucose [HbA1c] & HIV)

# Where do the Migrants Go?



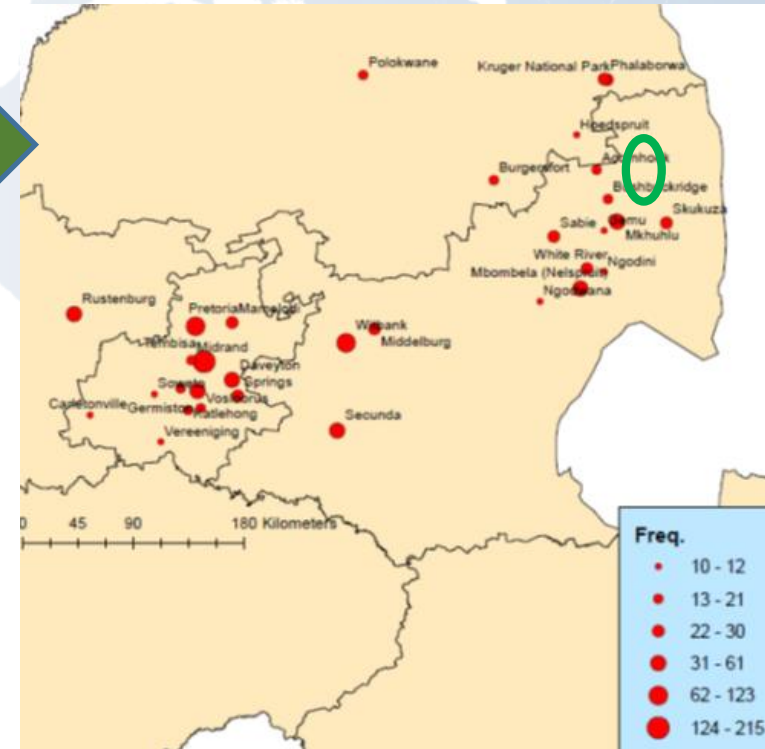
**Origin Community:** Agincourt sub-district, Bushbuckridge, Mpumalanga Province

**43% are migrants at Wave 1**

**51% are migrants at Wave 3**

**“Migrants”=sample members residing outside Agincourt**

**Many Temp/Circular**



**Leading Migrant Residences (10+ persons) by Wave 3**

# Cohort Characteristics at Baseline (W1)

		Non-Migrant (n = 1882)	Migrant (n = 1221)
<b>Age</b>	Mean (SD)*	28,9 (5,9)	29,8 (5,4)
<b>Sex</b>	Male*	840 (45%)	<b>722 (59%)</b>
	Female	<b>1042 (55%)</b>	499 (41%)
<b>Education</b>	Lower than matric*	<b>973 (52%)</b>	368 (30%)
	Matric or post school	909 (48%)	<b>853 (70%)</b>
<b>Employment status</b>	Not in labour force*	429 (23%)	161 (13%)
	Unemployed	<b>840 (45%)</b>	246 (20%)
	Employed	613 (33%)	<b>814 (67%)</b>

\* p-value <0.001

From  
Ginsburg 2021

# Constructing the Grit-S Index

## 8 Items Adapted from Duckworth

*Here are a number of statements that may or may not apply to you. For the most accurate score when responding think of how you would compare to most people not just you know well but most people in the world*

Also in Shangaan (local language)

- New ideas and projects sometimes distract me from previous ones
- Setbacks don't discourage me.
- I have been obsessed with a certain idea or project for a short time but later lost interest.
- I am a hard worker.
- I often set a goal but later choose to pursue a different one
- I have difficulty maintaining my focus on projects that take more than a few months to complete
- I finish whatever I begin.
- I am diligent.

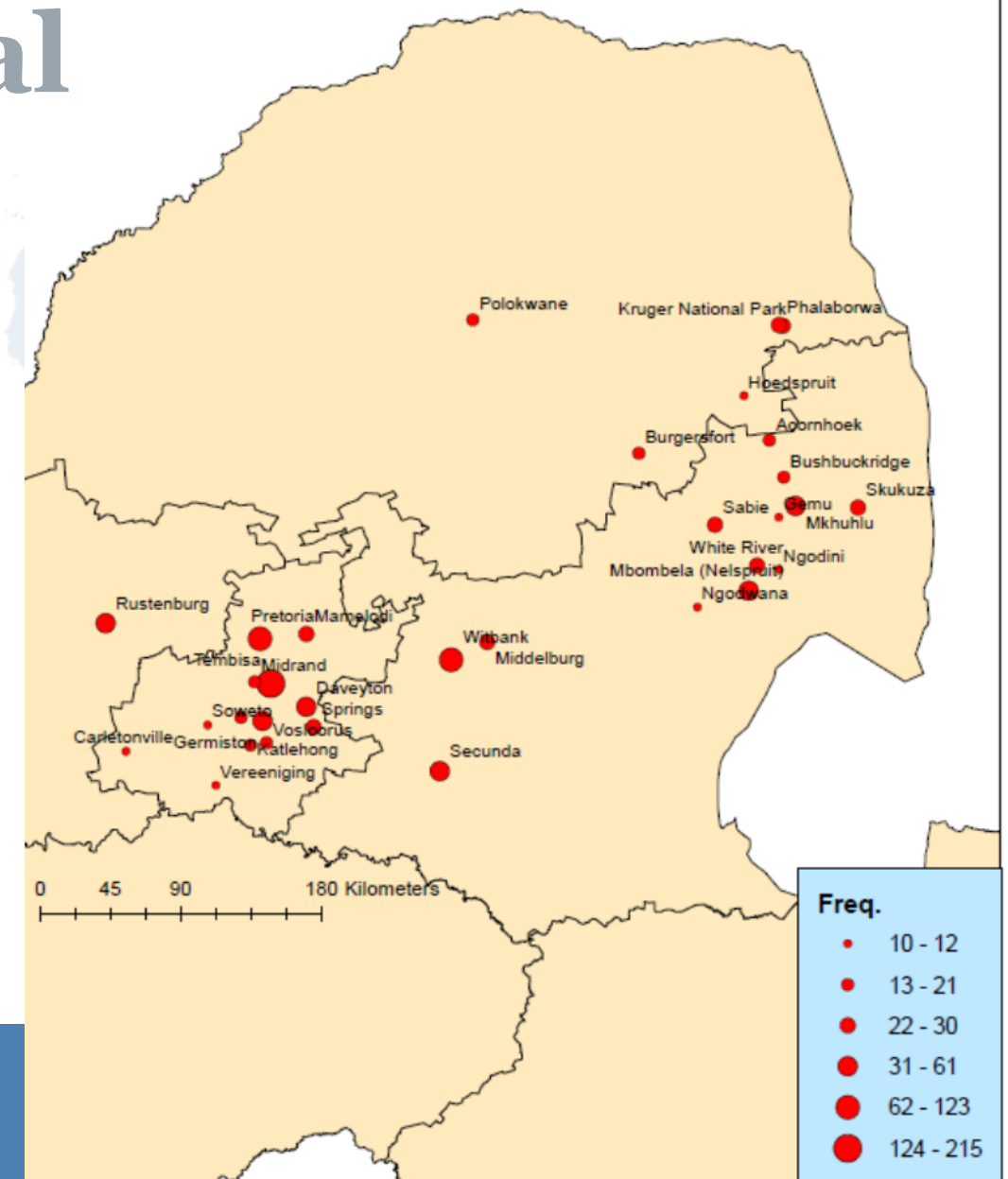
**RESPONSE : 1, Very much like me |2, Mostly like me |3, Somewhat like me |4, Not much like me |5, Not like me at all**

- **Principal Component Factor Analysis to obtain a single factor index**
- **First Factor with eigenvalue: 2.78257**
- **Proportion of Variation Explained 0.3478 → Index**

## The Most Recent List of Places Where People Live

# Migration SocioSpatial

Origin-Destination  
 “Meaning of Distance”  
 Urban/Rural  
 Kilometers  
 Social Scale  
 Selection from Origin  
 Adjustment to Destination  
 Our Geographic Migration  
 Pattern →



Binary: Any Migration Beyond Agincourt Origin by Wave 3 (2020-1)

	(1)	(2)	(3)	(4)
Grit Factor Index	0.209*** (0.0375)	0.166*** (0.0391)	0.129** (0.0471)	0.128** (0.0471)
Male		0.661*** (0.0768)	0.510*** (0.0928)	0.459*** (0.0945)
Age at Interview		0.0210** (0.00675)	0.000821 (0.00812)	0.00529 (0.00827)
Matric passing status		0.914*** (0.0805)	0.621*** (0.0970)	0.598*** (0.0975)
Lower Self-Rated Health Wave2			-0.511 (0.274)	
Migrant in Wave1			2.728*** (0.0995)	2.711*** (0.0994)
Total Health Conditions				-0.443** (0.155)
Constant	0.0728* (0.0370)	-1.474*** (0.228)	-1.643*** (0.271)	-1.703*** (0.272)
Observations	2964	2964	2962	2964

**More Grit  
→  
Higher  
Chances of  
Migrating**

Polytomy: Migration to Gauteng or Elsewhere Beyond Agincourt Compared to Non-Migrants (Reference)

	Anywhere but Gauteng Migrant	Gauteng Migrant
Grit Factor Index	0.0810 (0.0496)	0.235*** (0.0625)
Male	0.440*** (0.101)	0.501*** (0.121)
Age at Interview	0.00688 (0.00880)	0.00152 (0.0107)
Matric passing status	0.450*** (0.103)	0.937*** (0.132)
Migrant in Wave1	2.320*** (0.107)	3.415*** (0.134)
Total Health Conditions	-0.415* (0.166)	-0.504* (0.220)
Constant	-1.930*** (0.289)	-3.262*** (0.359)

Observations

2964

# Migrants with more Grit... find Gauteng

“If you can make it there, you’ll make it anywhere...”

-Frank Sinatra

# Two Sub-Factors Instead?

## “Persevere” + “Interest” : not much gain

<b>Grit Factor Index (All 8 Items)</b>	<b>0.128**</b>		
	<b>(0.0471)</b>		
<b>Interest-D&amp;Q subfactor (4 Items)</b>		<b>0.107*</b>	
		<b>(0.0464)</b>	
<b>Persevere-D&amp;Q subfactor (4 Items)</b>			<b>0.0957*</b>
			<b>(0.0472)</b>
Observations	2964	2964	2964
Pseudo R-squared	0.295	0.294	0.294

```
. corr GritIndex1 Interest1 Persevere1
(obs=2,964)

-----+-----
          | GritIn~1  Intere~1  Persev~1
-----+-----
GritIndex1 | 1.0000
Interest1  | 0.8425   1.0000
Persevere1 | 0.7747   0.3149   1.0000
```

Model: Any Migration; Other Covariates Virtually Unchanged



# Discussion, Implication, Extension

- Geographic mobility and grittiness appear to be linked in important ways (empirical results robust, so far)
- Grit & the public narrative – relatable ?
- Grit and personal cost:
  - enduring migration and labor conditions associated to benefit family
    - Related: migrants better off & retain employment during COVID
    - (Ginsburg et al *SSM-PH* 2022)
  - migrants at risk of adverse health consequences?
- Alternative models



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