Buried Without A Name: Ways in Which New Aging Methods Can Help Identify Individuals at the Mexican-American Border

Isabella Suarez

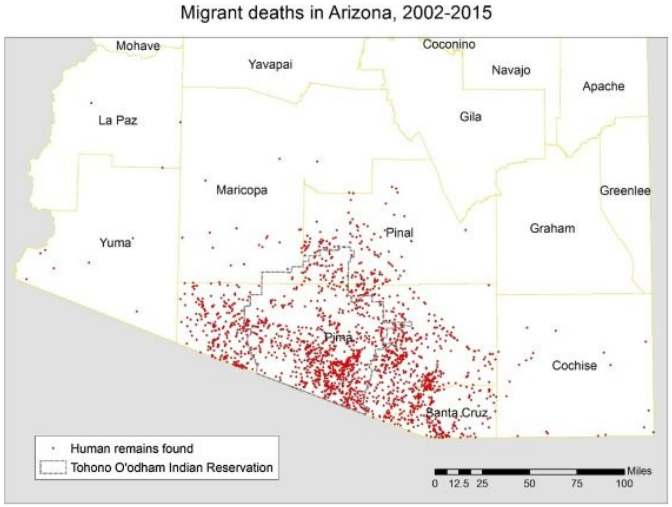
Project Summary

- A large number of migrants die at the border
  - Are unable to be identified
- I request funding to develop better ways to help in the process of identifying bodies found along the Mexican-American border
  - Interviewing Border Patrol Officers, Migrants, and Medical Examiners
  - Identifying skeletal remains using new aging methods developed in Forensic Anthropology

Introductions to Topics

- U.S.-Mexico border history
- Challenges in identification
- Old and new aging methods and problems with old aging methods

History of the Border



- 1998-2015 (6,571 bodies found at the 2,000 mile border)
- Migrant deaths have increased due to an increase in enforcement policy from the U.S Border Patrol(Mid 1990s)
- “Prevention through deterrence” States like Arizona and California doubled in number of deaths
- Offices like the Pima County Office of Medical Examiners is overrun with bodies.

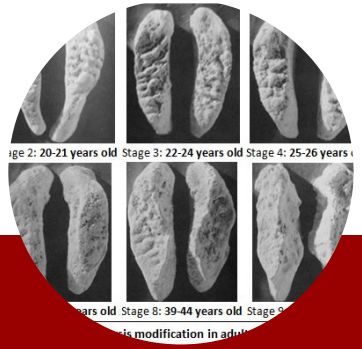
Challenges In Identification

- Offices overrun with bodies
- No legal mandates to identify a body
- Bodies are highly decomposed
- No material evidence found on the body
- Problems in identifying a definitive age for the individual
- No biological profiles for missing individuals

	Recovered Remains	Suspected Missing Person
Sex	Female	Female
Age	≥50 years	79 years
Race	Asian	Filipino
Stature	58.0 ± 1.7 inches (point estimate ± 95% confidence interval)	62 inches (driver's license)
Trauma	Healed antemortem vertebral and rib fracture and recent nonunion of right clavicle fracture	History of traumatic falls, one in the 1980s and another in early 2007 that resulted in right clavicle fracture

Aging

Old Methods, New Methods, and Problems

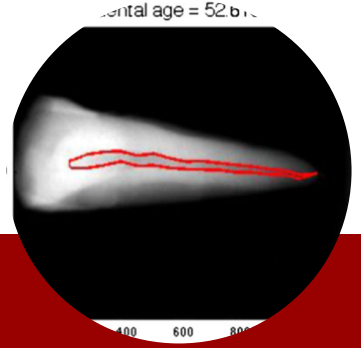


Old Methods

- Pubic Symphysis
- Auricular Surface
- Sternal Rib Ends
- Cranial Sutures

Problems With Old Methods

- Lack of uniformity
- Age could be too narrow, broad, or vague
- Aging older individuals



New Methods

- The Human Sacrum Method
- The Method in Pulp/Tooth Ratio in Canine Teeth
- Transition Analysis

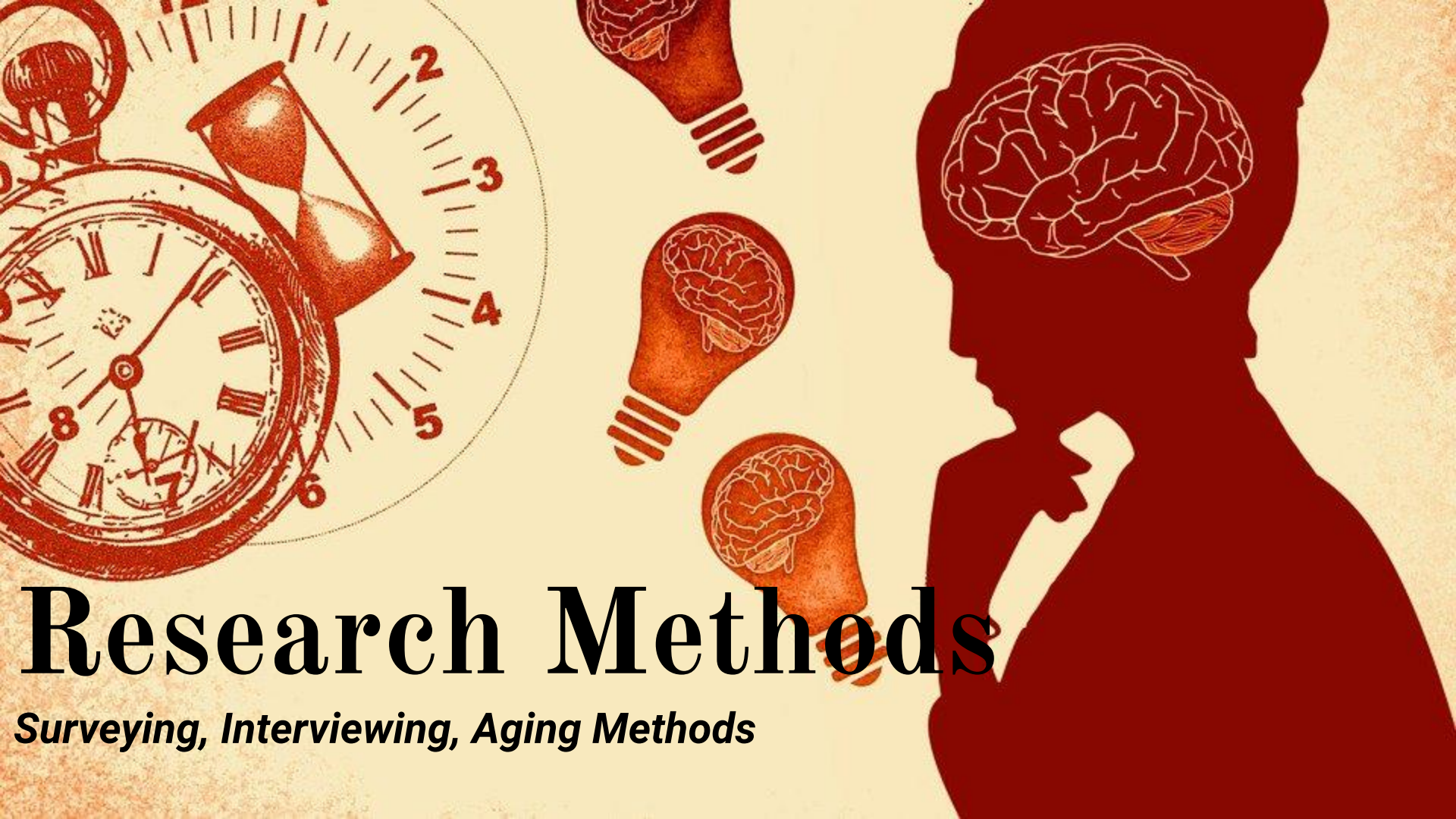
Hypotheses

1

If more families were able to give biological profiles through interviewing, than more individuals have a chance of being identified.

2

If newer methods of aging we applied at bodies on the border, than more of these individuals will be identified.



Research Methods

Surveying, Interviewing, Aging Methods

Surveying

Large scale survey conducted between border patrol officers and medical examiners

Choose individuals in those groups who seem genuine and interested in helping

Interviewing process begins

Interviewing Methods

Structured Interview

- Border patrol officers and medical examiners
- Predetermined questions:
  - How do they go about collecting the remains?
  - Where do they put these remains?
  - How long do they keep the remains until they bury them?
- Predetermined questions will let me get the answers I need

Unstructured Interview

- Immigrant families
- No predetermined/specific questions
- Conversational

Methods In Age-At-Death

Comparing Methods

- Comparing new techniques with the old techniques

New Aging Methods

- Help in aging older individuals
- Hope to see better uniformity

	New and Revised Methods						Original Methods				
	DiGangi et al.	Hartnett Ribs	Passalacqua	Buckberry & Chamberlain	Rougé-Maillart et al.	Hartnett Pubic Symphysis	Kunos et al.	İşcan et al.	Lovejoy et al.	Todd	Suchey-Brooks
20-39 N=6											
Inaccuracy	4.63	2.78	10.50	5.19	5.36	4.38	9.42	3.68	3.83	5.83	4.83
Bias	-4.27	1.30	9.82	5.19	4.22	-2.20	7.25	-3.08	3.50	1.50	0.37
Correct	6/6	6/6	5/6	6/6	6/6	6/6	4/6	2/6	4/6	0/6	5/6
40-59 N=5											
Inaccuracy	8.90	5.94	2.20	9.84	7.85	4.59	5.70	6.52	6.4	4.60	7.96
Bias	-8.90	-3.12	-0.53	9.84	-7.45	-4.59	2.10	-6.52	-6.4	-4.60	-7.96
Correct	5/5	4/5	5/5	5/5	5/5	5/5	5/5	1/5	1/5	2/5	5/5
60+ N=9											
Inaccuracy	18.95	14.21	9.72	5.60	12.53	12.31	14.94	26.87	17.5	21.67	15.89
Bias	-18.95	-13.52	-9.10	-3.95	-12.53	-12.31	-14.06	-26.87	-17.5	-21.67	-15.89
Correct	7/9	3/9	9/9	9/9	7/9	4/9	6/9	0/9	1/9	4/9	6/9
Total sample N=20											
Inaccuracy	12.14	8.72	8.07	6.54	9.21	8.01	10.98	14.83	10.65	12.65	10.59
Bias	-12.04	-6.48	-1.28	2.24	-6.24	-7.35	-3.63	-14.55	-8.43	-10.45	-9.03
Correct	18/20	13/20	19/20	20/20	18/20	15/20	15/20	3/20	6/20	6/20	16/20

Merritt, 2014

Significance

- Family members should be able to bury their loved ones
- A place for the family to mourn
- Closure to the family
- Telling the individuals story
- Buried with a name