

# Forensic Techniques that Helped Convict Some of the World's Most Notorious Serial Killers

Mackenzie Kilkeary

# Overview

- What is Serial Murder?
- Ted Bundy – Forensic Odontology
- BTK Killer – Digital/DNA
- Grim Sleeper – Familial DNA

# What is Serial Murder?

- According to the *Crime Classification Manual*
- Unlawful homicide of three or more individuals
- Each a separate event and location
- “Emotional cooling”

# What is Serial Murder?

- According to Keeney and Heide
- Premeditated murder of 3 or more victims
- Over time in separate incident
- Murder activity chosen by offender & in civilian context

# What is Serial Murder?

- According to Egger
- Murder of three or more
- Each event separated by time and space
- Offender spends great deal of time fantasizing and preparing for the event

# Other Variations in Definition

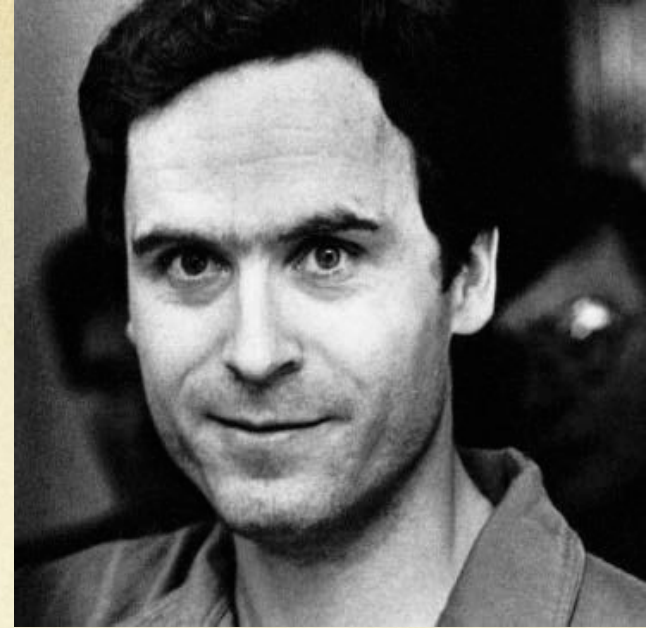
- Douglas and Olshaker describe the offender needing a sexual motivation
- Ferguson describes under three criteria
  - 3 or more victims during multiple events
  - During event, offender experiences pleasure, stress relief or otherwise feelings consistent with internal beliefs
  - Murder does not occur under influence from political or criminal organization

# Ted Bundy



- Theodore Robert Cowell
- Did not know his real father throughout life.
- He was told that his grandparents were his parents and mother was his sister.
- Showed a few disturbing tendencies early on, otherwise known as intelligent, funny and happy.

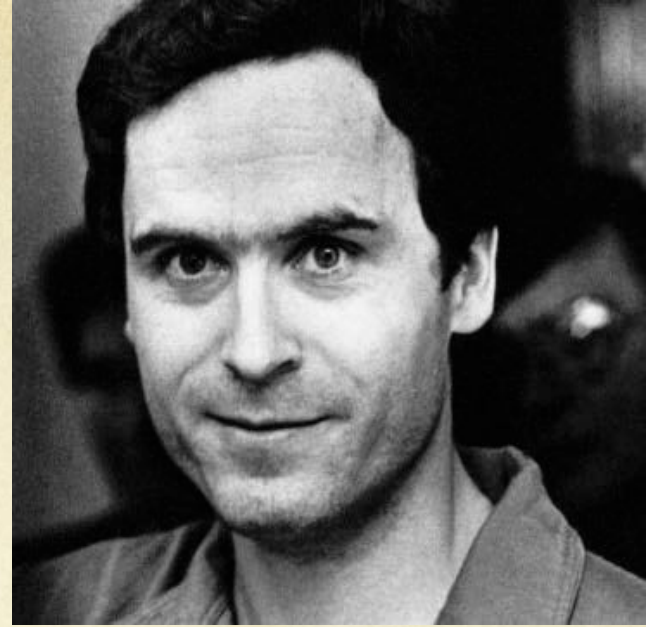
# Ted Bundy



- University years
- University of Puget Sound (UPS)
- University of Washington - Stephanie Brooks
- University of Utah - Law School



# Ted Bundy's Attacks



- 1<sup>st</sup> kill early as 1962
- Targeted young attractive women with a part in the middle of their hair.
- Kind, handsome, empathetic & very approachable
- Arrested in 1975 for having suspicious items in his trunk & escaped from prison in 1977.

# Ted Bundy



- 40 murder between 1964 & 1978
- Arrested while driving a stolen vehicle
- Forensic Odontologist matched bite marks from victim to Bundy's teeth.
- Sentenced to death in 1980 and executed in 1989 by "Sparky."

# Forensic Odontology

- Identify human remains
- Determine source of bite marks
- Estimate age of skeletal remains
- Testify on dental malpractice

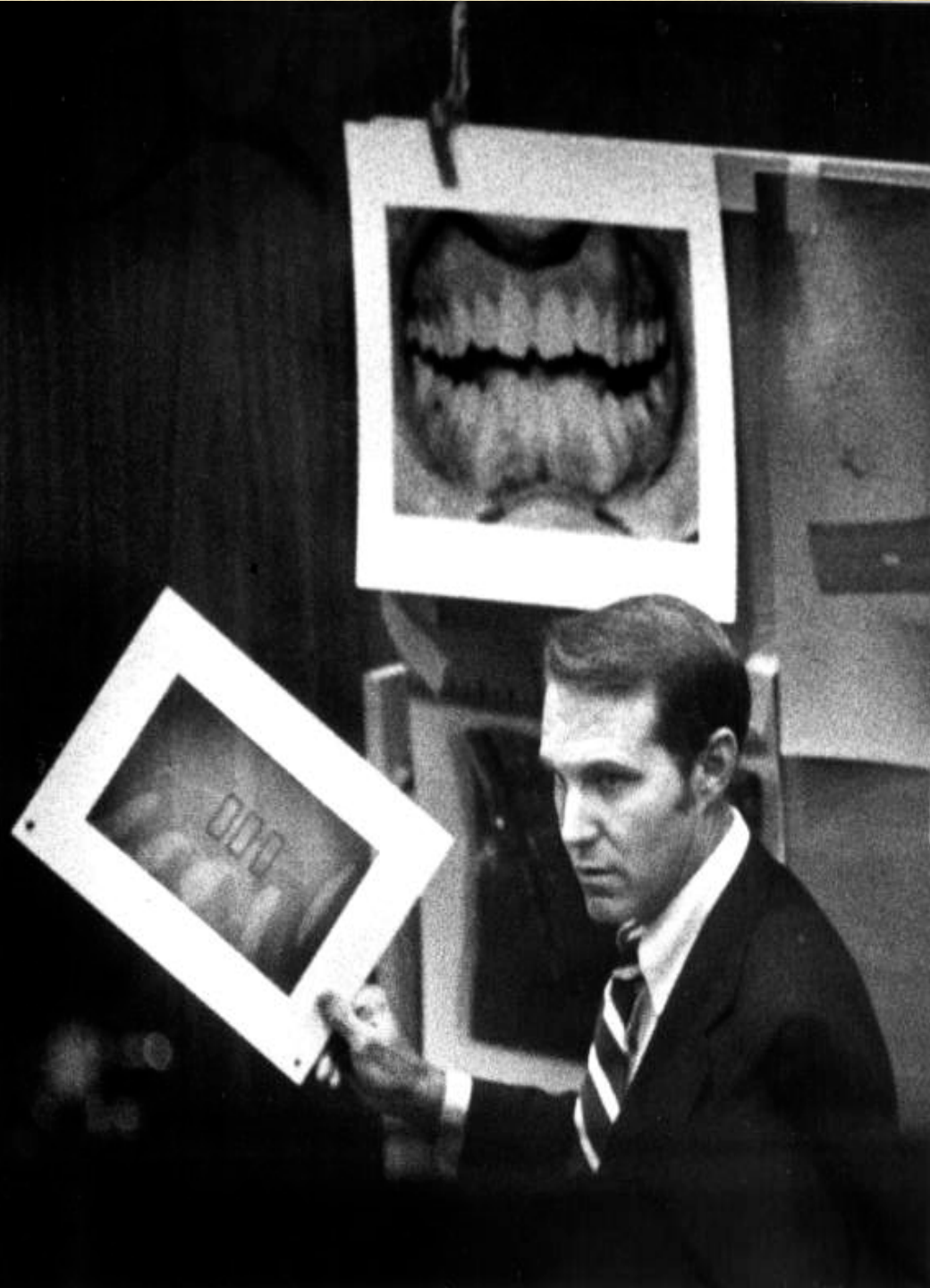
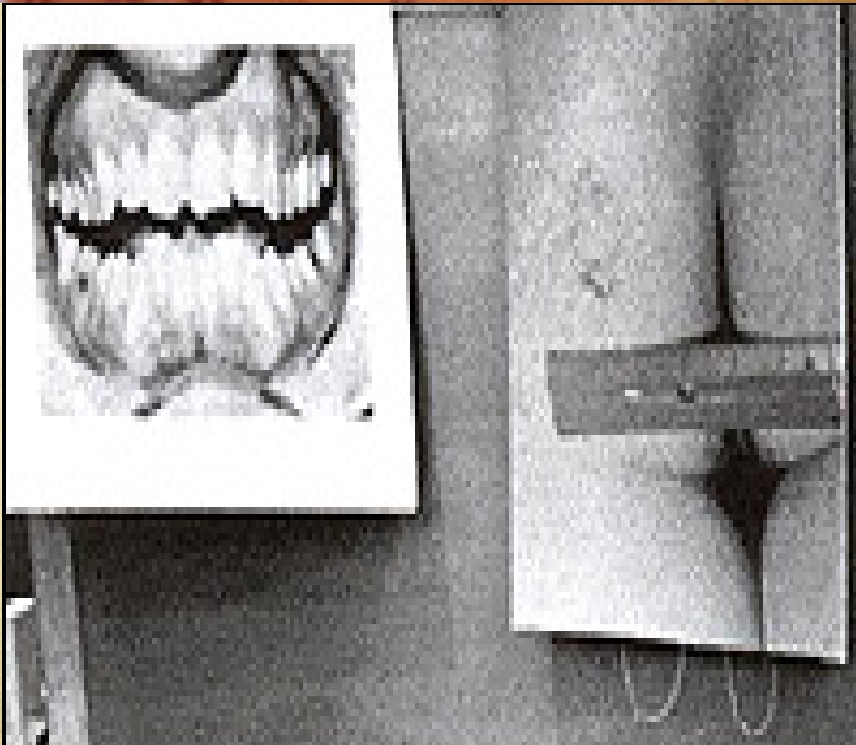
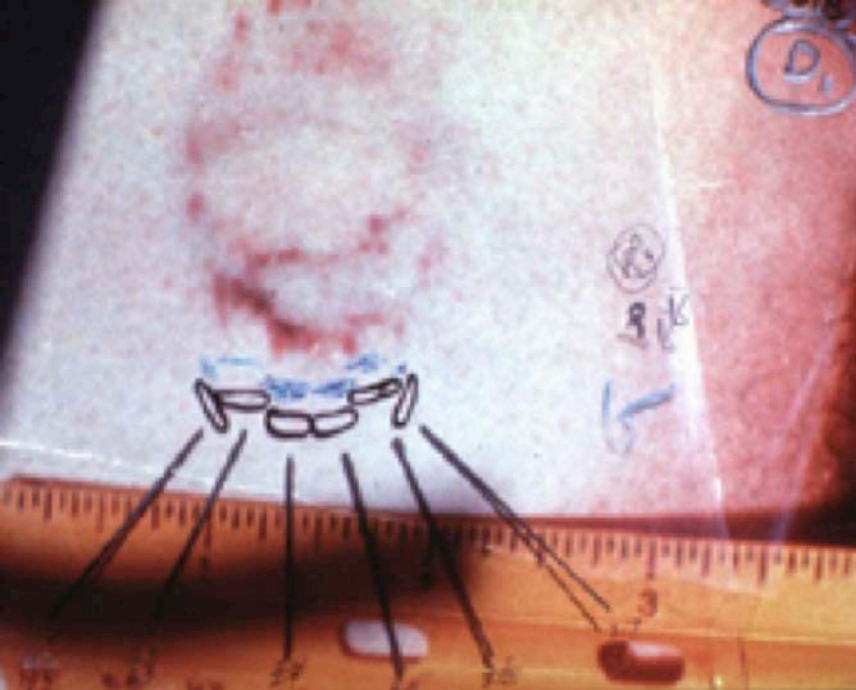
# Forensic Odontology

- Identification and comparison based upon recognition of distinct and unique features of individual's dental structures.
- Usually employed in mass disasters or skeletal remains.
- Bite marks – on other individuals, food, gum or other objects.

# Dr. Souviron

- Forensic Odontologist
- Compared bite marks to Bundy's teeth in court.
- Pointed out unique features that matched between Bundy's teeth and the marks.
- Described general size of teeth, structure of alignment, the chips, sharpness factors.





# How Reliable Is Bite Mark Comparison?

- Similar scrutiny to that of other comparative sciences.
- Complications: Elasticity of skin, growth of jaw and changes to teeth.
- 1999 study found a 63% rate of false identifications.
- No Statistics

# BTK Killer

- Dennis Lynn Rader
- Grew up in Wichita, Kansas
- Showed signs of trouble early on.
- Served in Air Force in 1960's & worked for ADT Security Services in 1974.





# BTK Killer



- 1<sup>st</sup> murders in 1974 - Bind, Torture and Kill
- Communication with public through letters.
- Known as an attentive husband and father, a boy scout troop leader & president of his church.
- Stopped killing for a period of time.

# The Floppy Disk



- BTK left a floppy disk for law enforcement to find.
- Law enforcement handed the disk to computer forensic specialists and traced it back to Rader's church computer.
- This along with familial DNA evidence from disk convicted Rader.

# The Floppy Disk



- Computer forensic experts found that the disk contained one valid file with “this is a test” and directing police to an index card left with the disk.
- Under properties section of a floppy disk, file saved by “Dennis.”
- Found disk had been used at the Christ Lutheran Church and Park City Library.

# Conviction & Life Sentence

- Arrested in 2005
- Charged with 10 counts of 1<sup>st</sup>-degree murder.
- Plead guilty and serving 10 life sentences.

# Grim Sleeper

- Lonnie David Franklin Jr.
- 1985 to 2007
- At least 10 murders
- Los Angeles, California



# Grim Sleeper

- Police found several bodies dumped in alleyways and dumpsters.
- Also known as the “Southside Slayer”
- May 2007 murder of Janecia Peters – linked DNA to 10, possibly 12 other murders.



# Familial DNA Testing

- Matched crime scene evidence with Christopher Franklin in criminal database.
- Undercover cop acted as waiter to obtain sample from Lonnie Franklin.
- Pizza sample matched saliva sample from victim.

# Grim Sleeper



- Lonnie David Franklin Jr. arrested in 2010.
- Convicted for 10 counts of 1<sup>st</sup>-degree murder and one of attempted murder in 2011.
- Awaits trial for four newly uncovered murders.



# Advantages and Disadvantages with Familial DNA

- Possible to gather suspects that are not in CODIS.
- Protect the innocent
- Family privacy concerns
- Potential for wrongfully conviction

# Acknowledgements

- Josh Stewart, my topic advisor
- Dr. Staton
- Amber Gantner

Questions?

# References

- Barsley RE. Odontology as a forensic science, the North American experience. *Forensic Science International* 2010, 201
- Dalal JS, Aggarwal KK, Bhullar DS, Sharma M. A case study of serial killers. *Journal of Punjab Academy of Forensic Medicine & Toxicology* 2009, 9(2):109-113
- Dresser R. Families and forensic DNA profiles. *Hastings Center Report* 2011, 41(3):11-12
- Giannelli PC. Forensic science. *The Journal of Law, Medical & Ethics* 2006, 34(2):310-319
- Keppel RD, Weis JG, Brown KM, Welch K. The jack the ripper murders: A modus operandi and signature analysis of the 1888-1891 whitechapel murders. *Journal of Investig. Psych. Offender Profil.* 2005, 2:1-21
- Lammers M, Bernasco W, Elffers H. How long do offenders escape arrest? Using DNA traces to analyze when serial offenders are caught. *Journal of Investtig. Psych. Offender Profil.* 2012, 9:13-29

# References

- Lotter K. Taking a look at human bite marks. Suite n.d. Retrieved from <https://suite.io/karen-lotter/ps92ah>
- Miller L. Serial killers: II. development, dynamics, and forensics. *Aggression and Violent Behavior* 2014, 19(1):12-22
- Pelisek C. Accused grim sleeper Lonnie Franklin Jr. is the ringmaster of his own murder trial. *LA Weekly News*. 2014, March 14
- Saferstein R. *Criminalistics: An introduction to forensic science*. Prentice Hall 2007, 9:4-26
- Vronsky P. *Serial killers: The method and madness of monsters*. Berkley Publishing Group 2004, New York, NY
- White JH, Lester D, Gentile MV, Rosenbleeth J. The utilization of forensic science and criminal profiling for capturing serial killers. *Forensic Science International* 2011, 209:160-165

# Picture References

- [http://jeweell.com/data\\_images/out/45/1160537-ted-bundy.jpg](http://jeweell.com/data_images/out/45/1160537-ted-bundy.jpg)
- <http://www.biography.com/imported/images/Biography/Images/Profiles/R/Dennis-Rader-241487-1-402.jpg>
- [http://media.knoxnews.com/media/img/photos/2013/06/16/media\\_71fce077b85b47b2aad8fec08d4396fd\\_t607.jpg](http://media.knoxnews.com/media/img/photos/2013/06/16/media_71fce077b85b47b2aad8fec08d4396fd_t607.jpg)
- [http://upload.wikimedia.org/wikipedia/commons/8/8b/Dental\\_evidence\\_ted\\_bundy.jpeg](http://upload.wikimedia.org/wikipedia/commons/8/8b/Dental_evidence_ted_bundy.jpeg)
- <http://forensidental.files.wordpress.com/2011/10/bundybitephoto.jpg>
- [http://www.laweekly.com/imager/lonnie-franklin-jr/b/original/2413669/148e/lonnie\\_lapd.JPG](http://www.laweekly.com/imager/lonnie-franklin-jr/b/original/2413669/148e/lonnie_lapd.JPG)
- <http://handwritinguniversity.com/crime/btkkiller/floppy.jpg>