



# The Embers' Model of Warfare

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- A Cross-Cultural and Integrated Investigation
  - Ecological (*ultimate*)
  - Social Structural (*proximate*)
  - Psychological (*proximate*)

Source: Ember, C. and M. Ember (1992).  
"Resource Unpredictability, Mistrust, and War."  
*Journal of Conflict Resolution* **36**(2): 242-262.

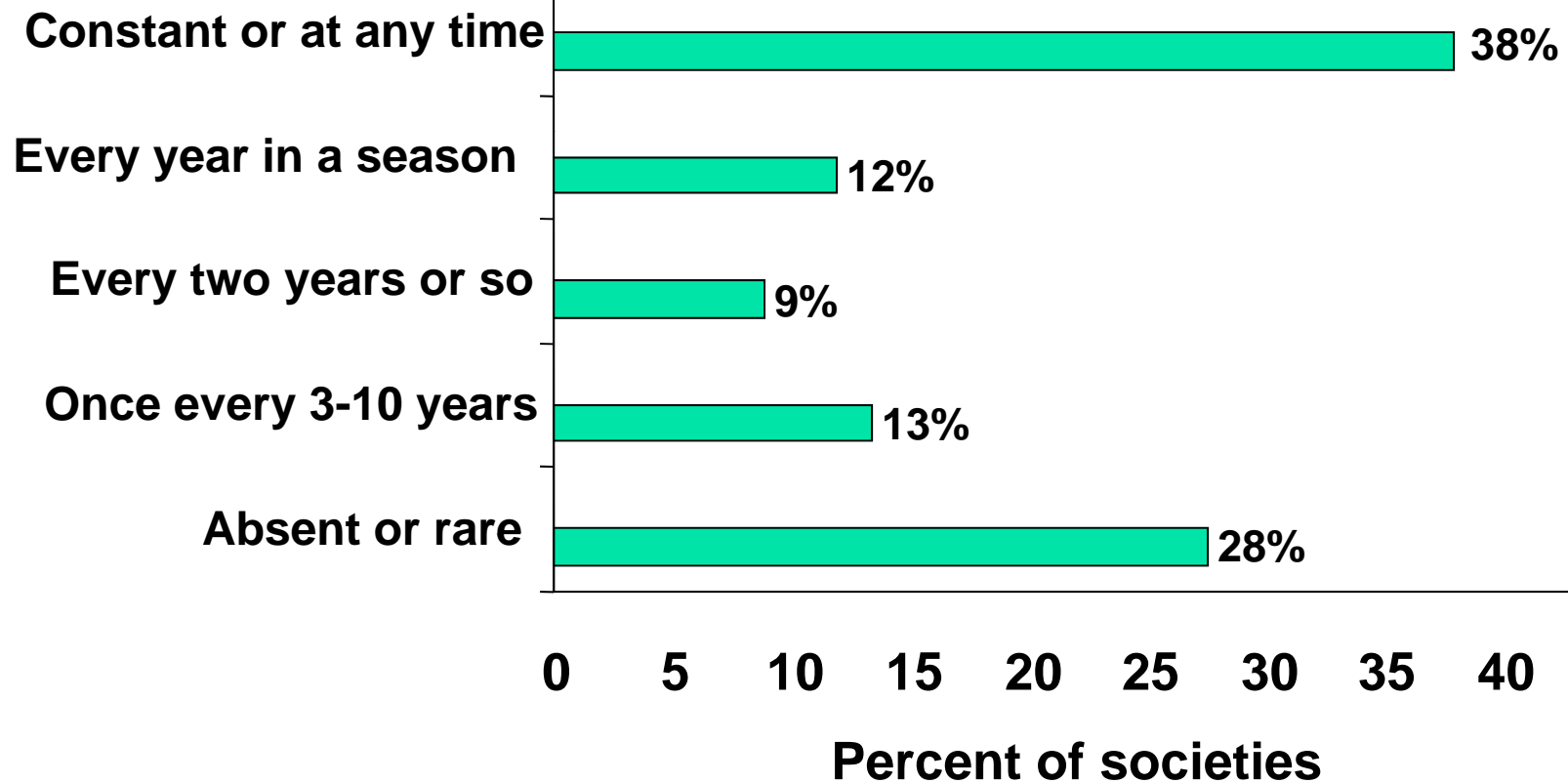


# Measures of warfare intensity:

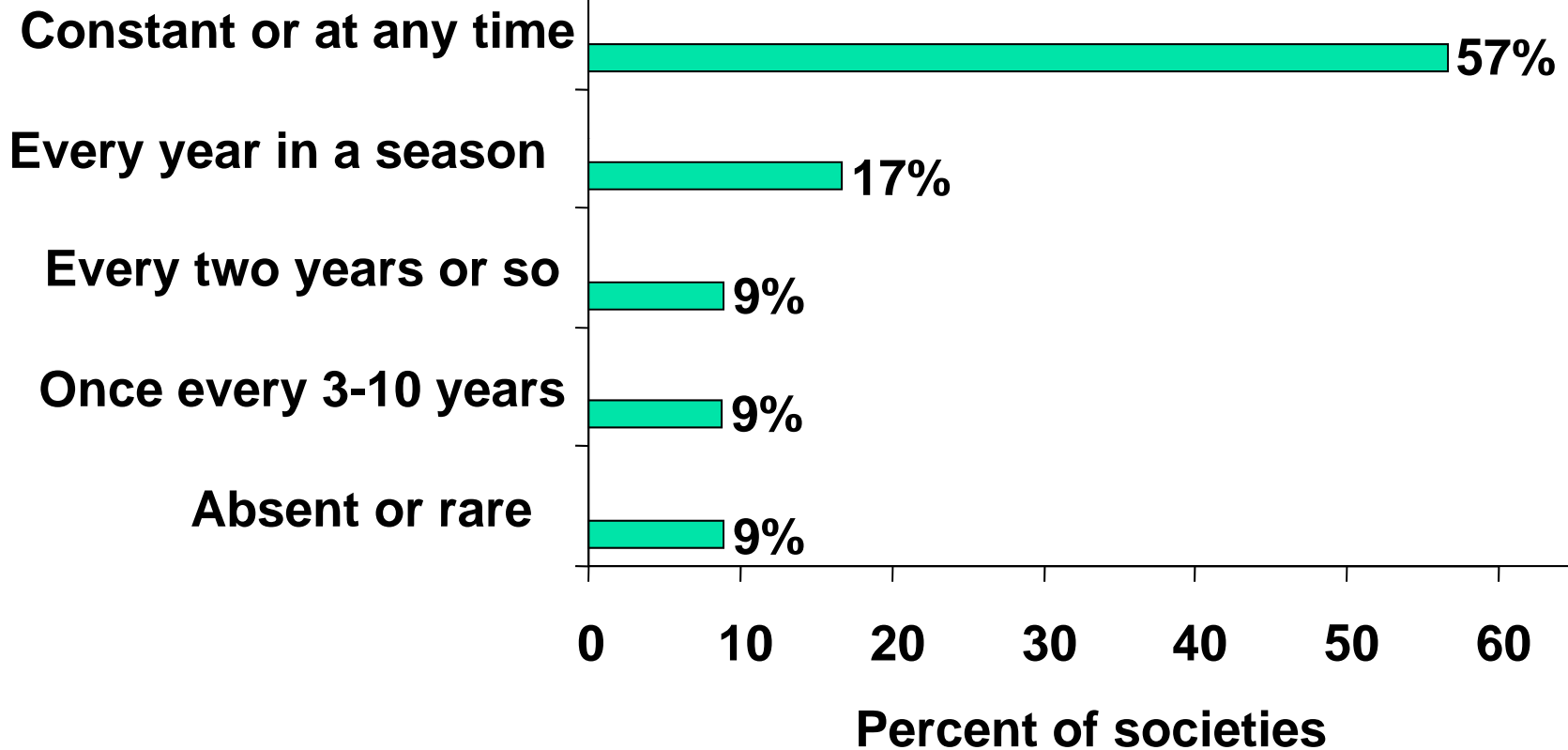
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1. Absent or rare
2. Every three to ten years
3. Once every two years
4. Occurs constantly at any time of the year

# Frequency of warfare in all societies: n=134



# Frequency of warfare in non pacified societies: n=90





## Measures of threat of famine:

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1. Low, food ample nearly all the time
2. Moderate, there is only the threat of famine
3. Moderately high, reported at least once in a 25 year period
4. High, more than once in a 25 year period



# Threat of natural disasters:

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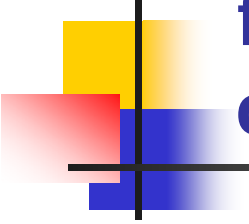
1. Low, food ample without report of killing pests or weather conditions
2. Moderate, no reported disasters but they are possible
3. Moderately high, at least one report of natural disaster during 25 year period
4. High, more than one disaster reported during a 25 year period



# Warfare: competition over scarce resources

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- The following factors correlate with the intensity of warfare:
  - Threat or history of famines
  - Threat or history of natural disasters (frost, floods, insect infestations, droughts, & storms)
  - Chronic or annual food shortage
- Natural disasters had the strongest correlation with war (rho 0.71) while chronic or annual shortages came in second at (rho 0.35)



## If war is adaptive in terms of dealing with food shortages it should lead to the taking of resources from the vanquished

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- Acquisition of a greater resource base sufficient to buffer against environmental uncertainty occurs
  - In 73% of cases victors sometimes drove vanquished from their lands
  - In 90% of the cases victors took non-land resources (e.g., domesticated animals and crop stores)



# Some comments

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- It is clear that famine and natural disasters may be related yet they were individually assessed.
- Since war is correlated with disaster frequency it means that under ordinary conditions people have ample resources but they go to war to buffer unpredictable disasters such that they have sufficient resources in times of need
- Chronic shortages (some famines) are much more weakly correlated because they are predictable and not as devastating. They are difficult to live with but not fatal.



# Psychological Theories of Warfare

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- All are not significant except for the last
  - Socialization for fortitude and childhood aggression
  - Father absence
  - Low need satisfaction
  - Cross-sex identity problems in males
  - Long post partum sex taboos
  - **Socialization for mistrust and fear of others**



## Mistrust and fear of others defined:

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- Encompasses the idea that others cannot be trusted to help in times of need, might be more likely to fight instead of negotiate during a time of crisis, and therefore are likely to respond aggressively in times of resource stress.



# The Role of Social Structure

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- If cross-cutting ties are strong: external warfare
- If cross-cutting ties weak: internal warfare

Both fail to predict warfare