Zipf (1949):

- Principle of Least Effort (Speaker's Economy) vs Force of Diversification (Auditor's Economy)

**Q principle (Hearer-based):**

- Make your contribution sufficient
- Say as much as you can (given principle R)
  - Provides lower bound on what's said, inducing upper-bounding implicatures
  - Speaker saying “...p...” implicates that (for they know) “...at most p...”

**R principle (Speaker-based):**

- Make your contribution necessary
- Say no more than you must (given principle Q)
  - Provides upper bound on what's said, inducing lower-bounding implicatures
  - Speaker saying “...p...” implicates “...more than p...”

**Example 1:** Q-based implicatures (scalar)

- a. He ate 3 carrots
- b. You ate some fo the cookies
- c. It’s possible she’ll win
- d. Maggie is patriotic or quixotic
- e. I’m happy
- f. It’s warm

**Example 2:** R-based implicatures (indirect speech acts and other kinds)

- a. Can you pass me the salt? Do you know the time?
- b. Would you like some tea? I don’t think so.
- c. She was able to win (compare with 1c)
- d. If you clean the garage, I’ll give you $5 (implicature: if you don’t, I won’t)
- e. They got married and had children
- f. John and Mary went to the movies
- g. Robert ate the cake. Vita ate the apples
- h. I boarded a bus. The driver was drunk.

Two similar principles operate in politeness (Lakoff 1973, Brown and Levinson 1979)

**Positive politeness:** respect positive self-image & approval/appreciation by others (Q)
- Be friendly, show camaraderie

**Negative politeness:** respect freedom from imposition and freedom of action (R)
- Deference: ‘Don’t impose’ ‘Keep aloof’
- Give options

The two principles are in conflict.

**Example 3:** Q vs R

- a. (i) It is possible that she won (Q). (ii) She was able to win (R)
- b. (i) Gary is meeting a woman this evening (Q). (ii) Larry broke a finger yesterday (R)
c. (i) I slept on a boat yesterday. (ii) I lost a book yesterday
d. “ty” (you-sing-informal) vs “vy” (you-plural, you-sing-formal)
e. Keenan’s example (1976): Q-based superiority implicature vs R-based ‘avoid tsiny’ (comes w/danger of being wrong or offensive) implicatures
f. Tannen’s example (1975):

She: Bob’s having a party. You wanna go?
He: OK

(later) She: Are you sure you want to go?
   → Q: give options, don’t impose, I mean no more than I say
   He: OK. Let’s not go. I’m tired anyway
   → R: don’t be too direct/wordy, 2nd mention must mean more than is said
(post-mortem) She: We didn’t go to the party because you didn’t want to
   He: I wanted to. You didn’t want to.

Example 4: where I’m not sure about Hom’s judgements
   a. I slept in a car yesterday -> The car was not mine
   b. Mort and David took a shower -> They took separate showers

Factors that seem to influence which principle will be applied:
   ☐ Is there a more precise form of about the same length? ‘a boat’ vs ‘my boat’
   ☐ Does the more precise form have extra implicatures? ‘my finger’ -> I only have 1
   ☐ Is the utterance a (near-)tautology? (induces application of R principle) ....

Meta-linguistic negation:
Example 5 only works for Q-based stuff
   a. He didn’t eat 3 carrots – he ate 4
   b. She isn’t patriotic or quixotic – she’s both
   c. She wasn’t able to solve the problem – she solved it
   d. I didn’t break a finger yesterday – I broke John’s finger

Scepticism: intonational contours are similar for the Q-based negated stuff and R-based negated stuff that works. Also: does meta-linguistic negation work for all Q-based stuff?

Example 6
   a. I didn’t sleep on a boat yesterday – I slept on John’s boat
   b. Gary’s not meeting a woman this evening – he’s meeting his sister

Example 7 Cancelling R-based implicatures using prosody
   a. She was able to solve the problem
   b. I broke a finger yesterday

Example 8 Negation works for conventionalized R-based stuff
   a. They aren’t married/friends/in love
   b. John didn’t have a drink – that was a Shirley Temple
   c. My secretary didn’t smile – I have a male secretary

General schema for how it works:
Marked (relatively complex/prolix) expression => marked message
1. Speaker uses marked E' when E is available
2. Either extra stuff was irrelevant/unnecessary or it was necessary (E couldn’t have been used)
3. R principle is against using irrelevant/unnecessary expressions, so extra stuff was necessary
4. Through use or, by conventionalization, through meaning, E => unmarked situation s, representing stereotype/salient member of the meaning of E/E’ (R-based inference)
5. E’ => complement of s w.r.t. original meaning of E/E’

Instances of this schema:

Avoid pronouns (where PRO available, or a reflexive) - Pragmatics vs syntax (BT)

Example 9

a. John would much prefer his going to the movie
b. John would much prefer his book
c. He likes himself/*him
d. He said that she likes *himself/him
e. Yesterday, today, tomorrow

Avoid synonymy

Example 10:

a. fury vs curiosity
b. fallacy vs tenacity
c. John made the plate move vs John moved the plate
d. John caused the sheriff to die vs John killed the sheriff

But: what counts as a counterpart?

Example 11:

a. John made the plate fall = John dropped the plate
b. This really makes me angry = This really angers me
c. Wild horses couldn’t make me stay away = Wild horses couldn’t keep me away

Additional cases

Example 12. Conventionalized implicatures
a. Can you (please) close the window?
b. Could you (please) close the window?
c. Are you able to (?please) close the window?
d. Do you have the ability to (*please) close the window?
e. It’s (**please) cold in here
f. (Please) close the window

Marked = literal (vs unmarked)

Example 13

a. Are you able to pass the salt?
b. I am able/allowed to help you with that
c. Are you going to join us?

d. I am going to/willing to marry you

Double negatives: not uncommon, not infrequent

Q and R in language change

**Deirdre Wilson and Dan Sperber: Inference and Implicature.**

Grice’s maxims are not a theory, just a framework for one.

Given the wonderful power of the Cooperative Principle,

1. How do we generate “potential implicatures” – where does the content of implicatures come from?
2. How do we decide which of the potential implicatures are actually intended?

**Example 1** “Potential implicatures”

a. He: Will you have some coffee? She: Coffee would keep me awake

b. (i) She doesn’t want to be kept awake. (ii) She won’t have anything that would keep her awake. (iii) She won’t have any coffee.

c. (i) She wants to be kept awake. (ii) She will have anything on offer that would keep her awake. (iii) She will have some coffee.

**Relevance Theory**

Replace all maxims by one: speaker tries to be as relevant as possible in the circumstances

**Definition 1.** A proposition P is relevant in a context \( \{C\} \) iff P has at least one contextual implication in \( \{C\} \).

**Definition 2.** Contextual implication: one that needs both P and \( \{C\} \) and cannot be derived from either on its own.

**Definition 3.** Start with small \( \{C\} \) containing recently processed propositions. Add from encyclopedic knowledge as necessary, one step at a time. The only encyclopedic entries accessible immediately are ones that relate to the concepts in the current propositions.

**Q-based principle:** minimize processing cost = minimize number of steps in the lookup procedure.

**R-based principle:** maximize number of contextual implications for a given processing cost.

Threshold at which further contextual info becomes ‘too costly to look up’ variable by situation and by speaker.

**Example 2.** Susan doesn’t drink alcohol

So, what are the variables in implicature calculation?
- What is the context? (speaker knows that hearer knows that speaker knows ... that C)
- What is the ‘cost threshold’? (how ‘hint-oriented’ is the hearer; speaker knows that hearer knows how hint-oriented speaker is)

Strength of implicatures:
Is the implicature only one among a range of roughly cost-equivalent conclusions that hearer could have drawn?
How wide is that range?

Varying degrees of confidence in the proposition – [-1, 1]

**Definition 4.** Total effect of a proposition P on a context \{C\}:

1. Did it directly affect the value of any propositions already present in \{C\}?  
   i. If so, how large is the change?
2. Did it indirectly affect the value of any proposition in \{C\}?  
   i. If so, how many propositions were affected?
3. Did adding P yield any new contextual implications?  
   i. If so, how many there were  
   ii. And how high were the values of the implicatures?

The higher the value of new implicatures, the greater the modification to the context.

New definitions:
**Definition 1’.** Proposition P is relevant in a context \{C\} iff it modifies \{C\} in any of the 3 ways in Def. 4.

The more P modifies the context, the more relevant it is.
The higher processing cost required, the less relevant it is.

**Relevance Principle:** maximize the relevance of P, as defined in 1’.

**Applications:**
1. Back to her having coffee: effect of the time of day on context
2. Bridging inferences:  
   a. necessary preconditions to reconvering any contextual implications at all  
   b. more accessible than any alternative assumption
3. Garage: for implicatures, assume a minimal confirmation value that would maximize relevance
4. Mrs. X is an old bag.

**Claims:**
Recovery of implicatures never involves appeal to deliberate violation of Principle of Relevance.
There is no clash of principles in this theory, so no need to account for their interaction.