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- **Herring & Martinson, "Assessing Gender Authenticity in Computer-Mediated Language Use."**
  - Van Gelder (1991) — Strange case of the electronic lover — CompuServe "CB" chat channels, 1983.
    - Joan, "Talkin' Lady," NY neuropsychologist in her late 20s, disabled by car accident.
    - Played by Alex, a NY psychiatrist in his early 50s — claimed he wanted to "experience the intimacy of female friendship."
    - One woman had an affair with Alex after being introduced to him by "Joan."
  - Stylistic differences in language use by gender
    - Gender of email author can be detected **even with** stylistic cues removed
    - Weighted combination of features — no one obvious indicator
  - Turing Test — Alan Turing, 1950.
  - Turing Game — Josh Berman and Amy Bruckman at Georgia Tech.
    - Moderator for a given game picks one or more contestants; the rest of the players become judges.
  - Table 2: Did not analyze individual features. "Most instances of emoticons, laughter, thanks, and apologies were used in female games, and all but one instance of profanity and sexual language are found in male games."
    - Note: more female than male features included in coding scheme. Possible methodological flaw.
  - Note on methods:
    - Chi-square test is a statistical test of whether an actual (observed) distribution follows a hypothesized distribution
    - Wald test is a test of whether a difference is significant.
  - Table 3: Message length in words. Real-life males produced significantly more words (mean 14.8) than real-life females (mean 13.0).
    - In contrast to the stereotypical view expressed by Turing Game participants that men talk less than women.
  - Table 6: stylistic features of winners and losers
    - "Winners" — those with the highest score (best-rated performed gender authenticity) in a given game. "Losers" — all others.
    - "Male winners avoided game-opposite gender features more than did female winners, or losers of either gender ... However, winners did not use significantly more gender-appropriate stylistic features than did losers overall."
    - "Male winners have shorter messages than male losers, whereas the converse is true for female winners and losers."
  - Table 10: Ratings of gender performances
    - All the differences in ratings are well within a standard deviation of each other.
      - What does this tell us?
    - Possible reasons for lack of significance, given prior findings on accurately identifying males and females from language.
      - What we **think** shows gender (stereotypical content?) differs from what actually shows gender (stylistic cues?).
      - We give off more than we know.
      - The artificial "game" situation and the fast pace (synchronous chat) altered the dynamics of the situation, making it harder to perform and to judge.
        - "Playful environment"
  - Issues with this work
    - Why not break out the individual stylistic features, especially given what we note with Table 2?
      - Maybe the N is too small

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        - Maybe they didn't want to perform exploratory analysis outside their initial hypotheses.
    - "Female behavior is more culturally stereotyped than male behavior"? More stereotypically female **questions** were asked, but contestants performing females with more stereotypical **answers** were lower rated.
        - Female defined in opposition to "normative" male?
    - Conventional signals — nicknames, stereotypes. Low cost.
    - Assessment signals — gendered linguistic cues. Hard to fake; hard even to recognize consciously.
- **J. Donath. "Mediated Faces."**
    - **What is emotion?**
        - One definition: rapid-onset short-term involuntary physiological change
        - Reciprocal relationship with cognition
            - Used to be considered a one-way street — cognition influencing emotion
    - **Generating facial expressions**
        - We all have a degree of autonomy in what we display with our faces
        - More than 100 muscles control facial expression
            - Most people don't have complete voluntary control
            - Paul Ekman has taught himself (and trained some others) to have a greater degree of control, to the point that he can synthesize the "genuine" (Duchenne) smile and other expressions that usually can't be faked. Also, he can generate unusual expressions that humans don't typically make at all.
        - Both reflect our emotional state and, to some degree, affect it.
            - Complex interplay between the physical expression and the emotional experience
            - e.g., forcing a smile actually improves mood.
            - Microexpressions — fleeting facial expressions outside of conscious control
        - Ekman's Facial Action Coding System
    - **Perceiving facial expressions**
        - We perceive and interpret facial expressions rapidly and automatically.
            - It is hard to override these immediate impressions even with deliberate cognitive effort — e.g., you may know that video-conferencing causes a disruption in eye contact, and yet, "If you are looking at me from a video window and you appear to glance over my shoulder, I may instinctively interpret this as meaning your attention is drawn to the activity occurring behind me, rather than to the activity in your own space beyond the camera." (Donath)
        - Our own emotional state influences to some degree how we perceive and interpret the faces of others (as it affects all cognition).
    - **Being there vs. beyond being there**
    - **Information conveyed by faces**
        - Individual identity
        - Social identity
        - Expression
        - Gaze
    - **Immediately salient information — does it lead to stereotyping?**
        - Gender
        - Age
        - Ethnicity

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- Unique identification
- "A lack of cues as to social identity does not lead to people thinking of each other as ciphers; rather, categorization still occurs, but with a high likelihood of error — an error which can have further consequences."

- **Facial features**
  - Structural
    - Bone structure
    - Skin color
  - Dynamic — motion
    - We can sometimes infer some qualities (e.g., age, gender) from motion alone
  - Decorative — "choice and circumstances"
    - Glasses
    - Hairstyle
    - Makeup
- **Gaze**
  - Humans have smaller irises relative to the whites of our eyes than do most (all?) other animals. This allows us to perceive where another person is looking.
  - Social and informational functions
    - Disambiguates referents (looking at "that")
    - Turn-taking in conversation
      - Speakers look at listeners 30-40% of the time
      - Listeners look at speakers 60-70% of the time
      - Can also reflect status relationships, or intimacy — we look less at strangers (in terms of frequency and duration)
  - We can detect deviation in gaze of even very small angles — so we are highly sensitive to slightly broken eye contact
  - Some possibilities for correcting for gaze in CMC video applications
    - Screen with a small camera in the middle
    - Multiple cameras, allow construction of reasonably accurate 3D transformations to re-orient face
    - Approximate software transformations of face orientation from a single camera
- **Ways of bringing the face to the interface**
- **Video**
  - Audio lag is most damaging to the flow of interaction
  - Motion lag less damaging but still disturbing.
  - Very slight delays become perceptually significant
    - In this case, **functionality is usability.**
- **Avatars, expressiveness, and meaning**
  - Representing humans is a dangerous business.
  - "By providing the avatar with legs we then require it to walk, and walking is inherently expressive. All that the user has indicated is an endpoint, but via the avatar, has communicated much more.
- **Design principle**
  - Consider that all elements of a representation will be "read" by viewers
  - Thus, parsimony is key

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- Edward Tufte tells us to "omit needless lines" from charts and graphs
- Strunk and White tell us to "omit needless words"
- This is similar in spirit, but not quite the same. Omit needless social cues.
- If anything, the danger is greater here because we perceive faces automatically and holistically.

- Appropriate semantics
  - Bad idea: Chernoff faces
- Appropriate precision
  - Don't imply more precision than you have