



Levels of “Working Together” in Collaborative Information Seeking and Sharing

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Mturk Survey

- Conducted Spring 2010
- Asked about general CIS / search results sharing behaviors and practices (esp. freq)
- Asked about five specific recent searches
 - 2 searches in which they shared results found
 - 1 search in cooperation with other people
 - 1 known item search
 - 1 exploratory search

Results presented here are preliminary

Demographics

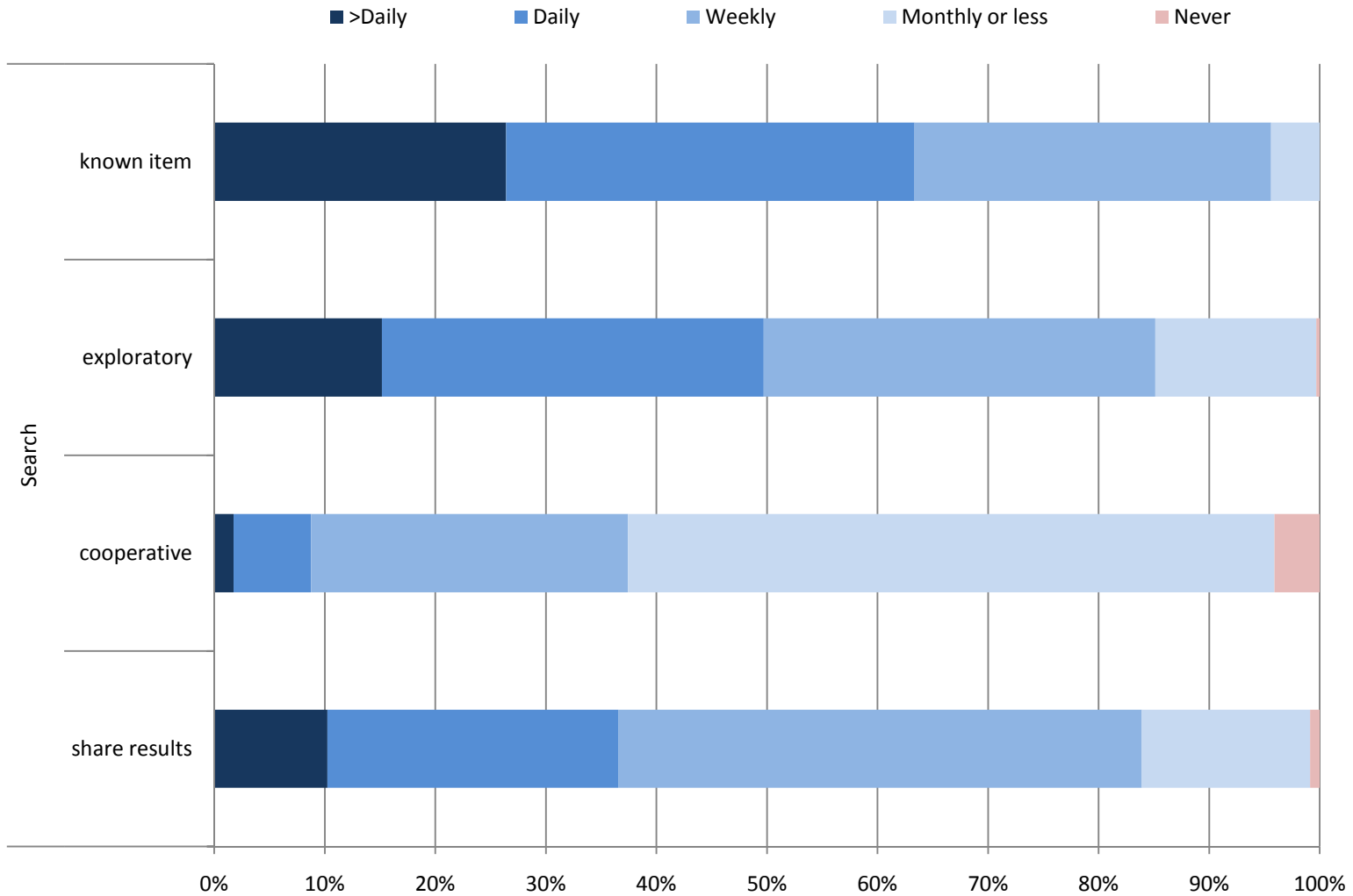
- 452 started, 344 completed & paid
- 64% female, 36% male
- Age: avg = 32, median = 28, stdev = 11

| | Employed | Not employed | |
|-------------|-----------|--------------|-----------|
| Student | 52 | 56 | 108 (32%) |
| Not student | 150 | 84 | 234 (68%) |
| | 202 (59%) | 140 (41%) | |

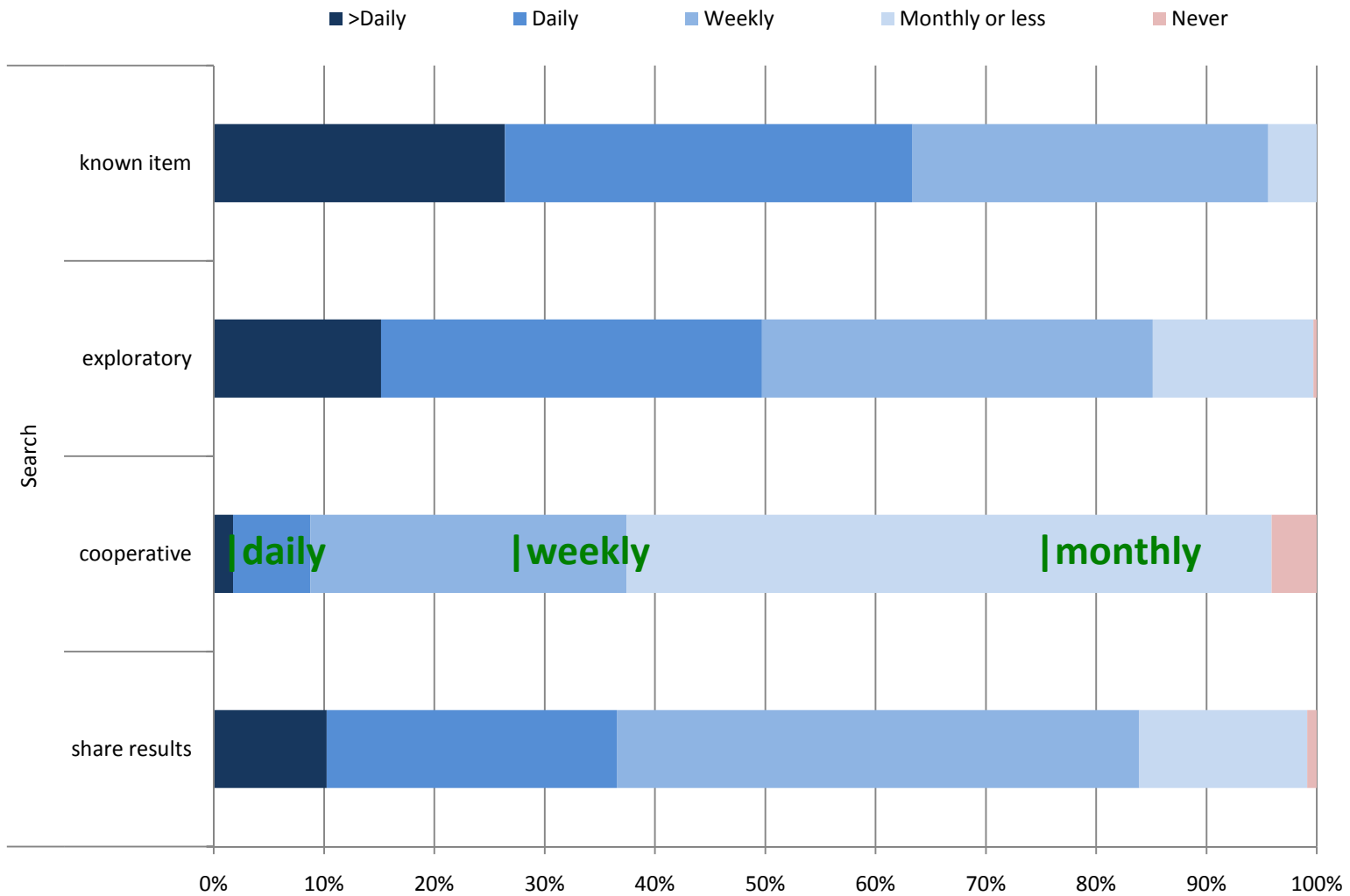
Of the 108 students: 47% pursuing Bachelor's degree, 27% Master's

Sample of occupations: teacher / delivery man / operations specialist / riding instructor / business manager / scientist / research analyst / engineer / application program writer / automotive assembler / middle school teacher / program manager / supervisor / graphic artist / laborer / secondary teacher / office manager / police officer / research assistant / clerical worker / english tutor

Frequency of Search Activities

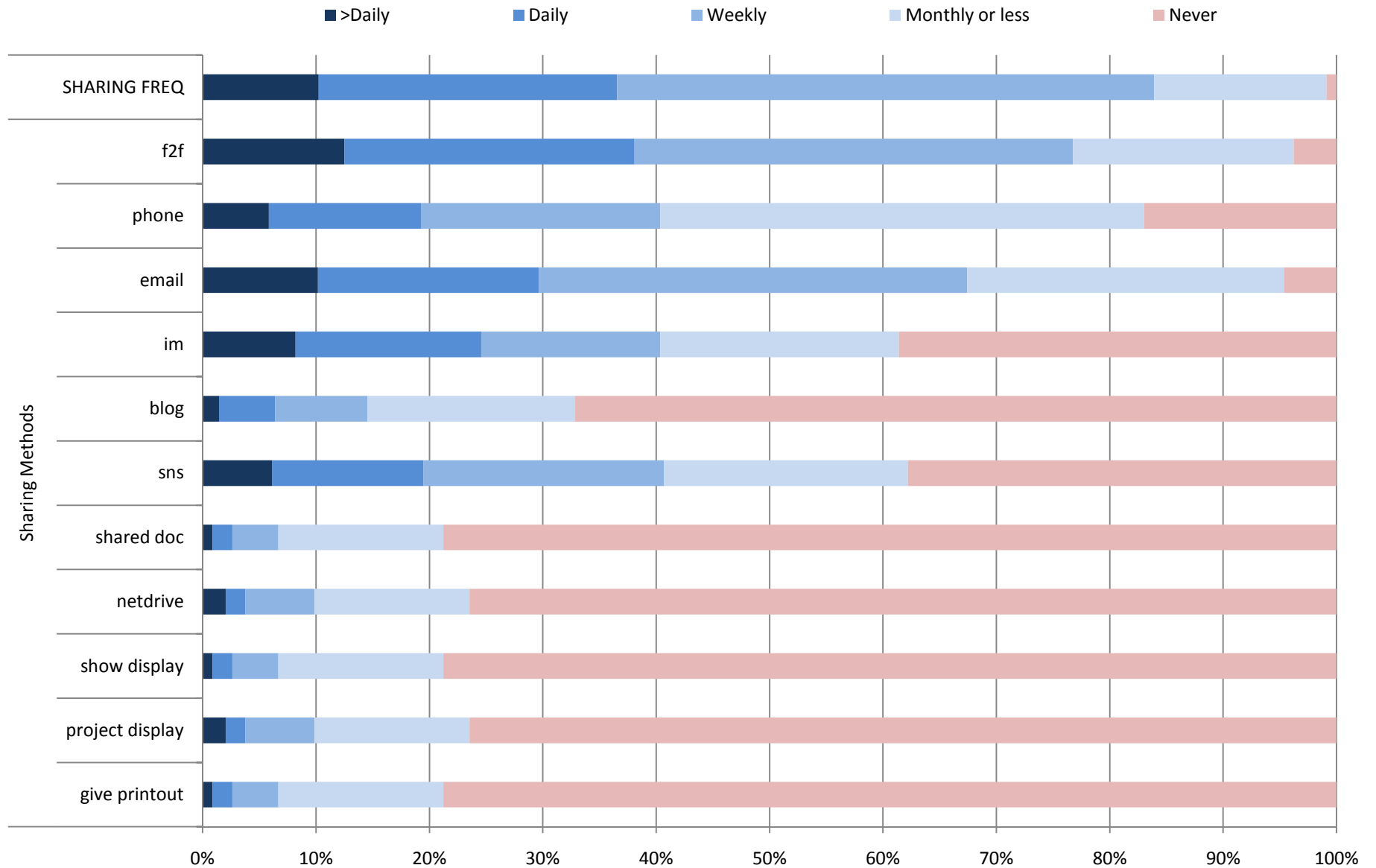


Frequency of Search Activities

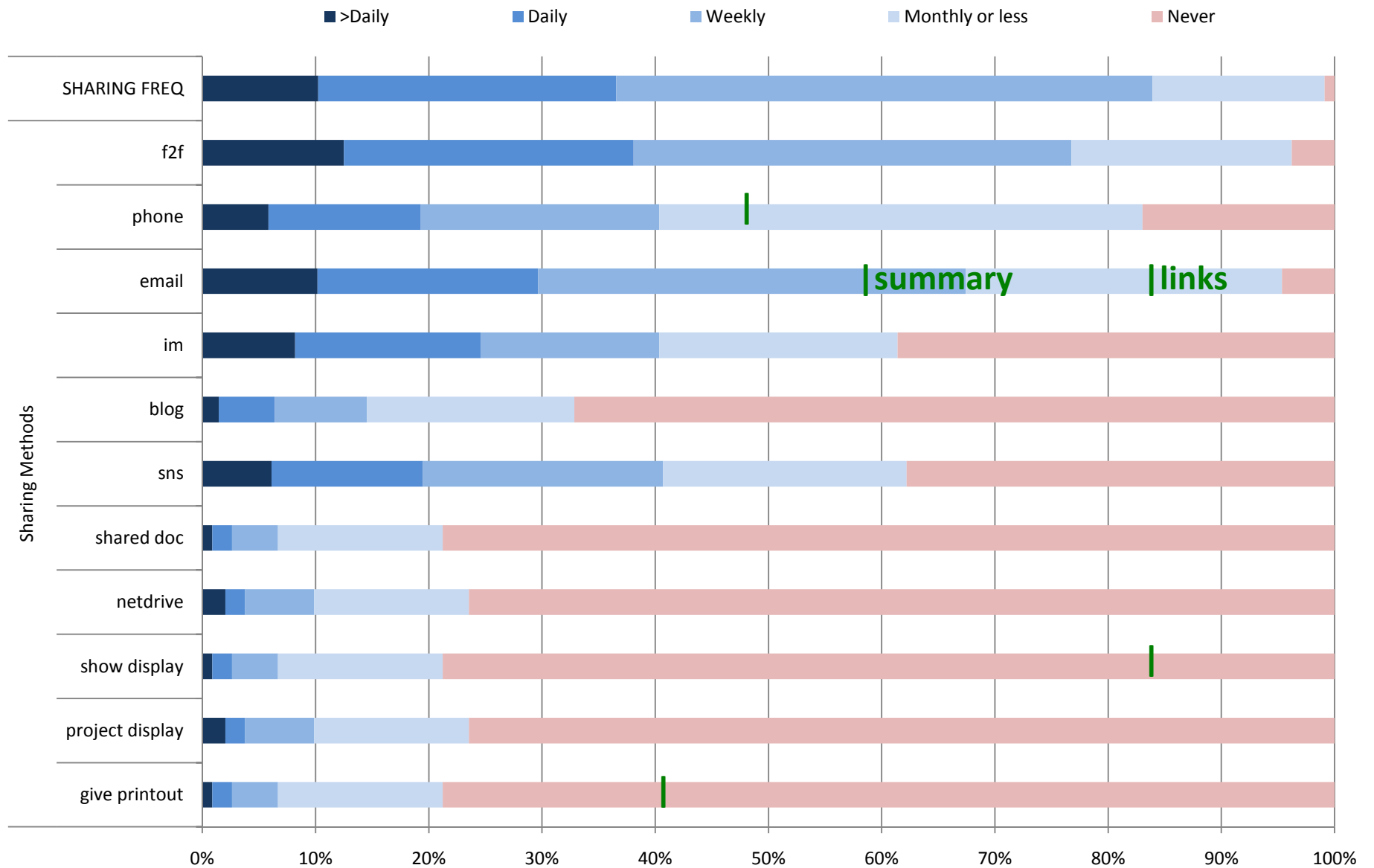


| = Morris 2008

Sharing Methods

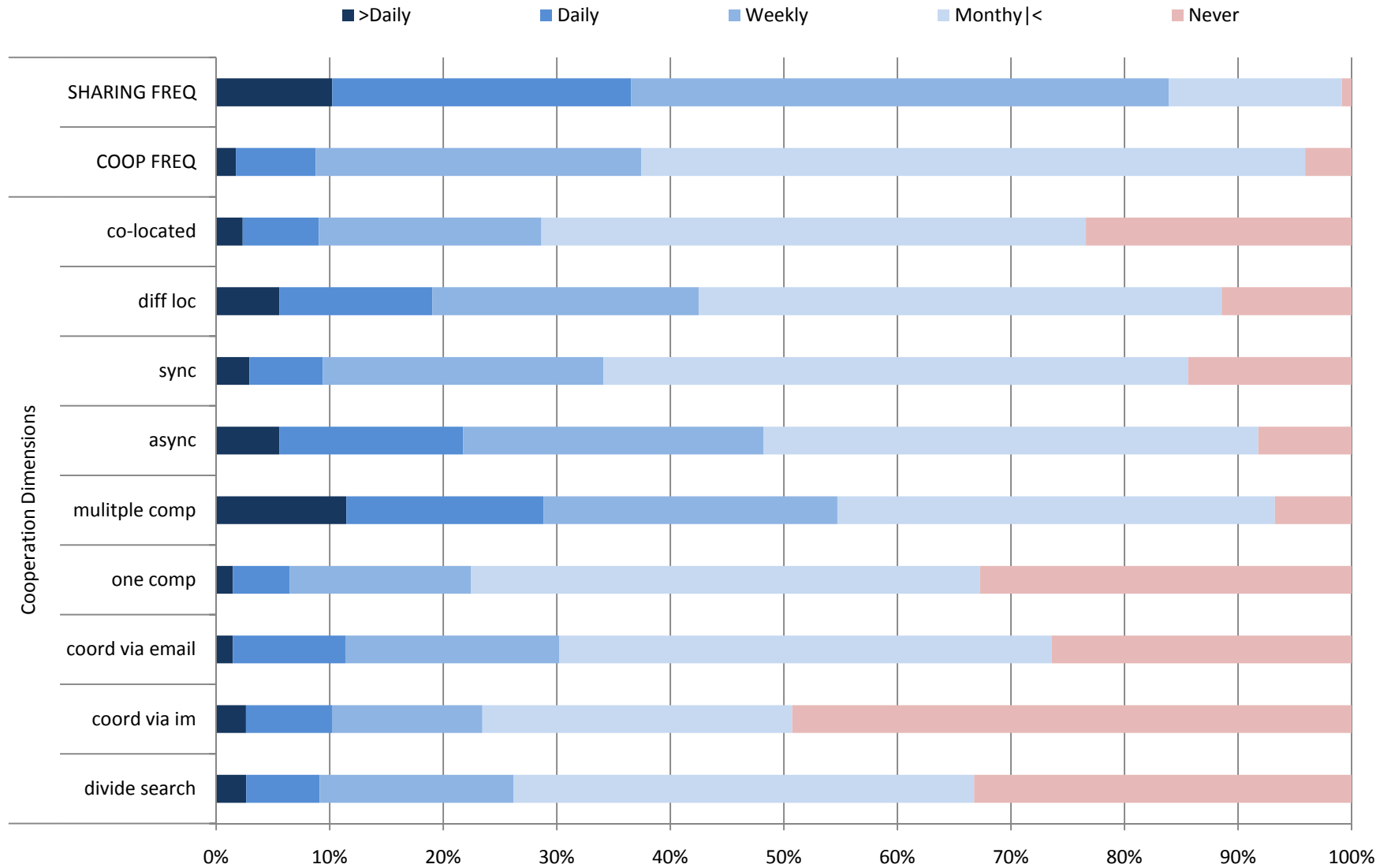


Sharing Methods

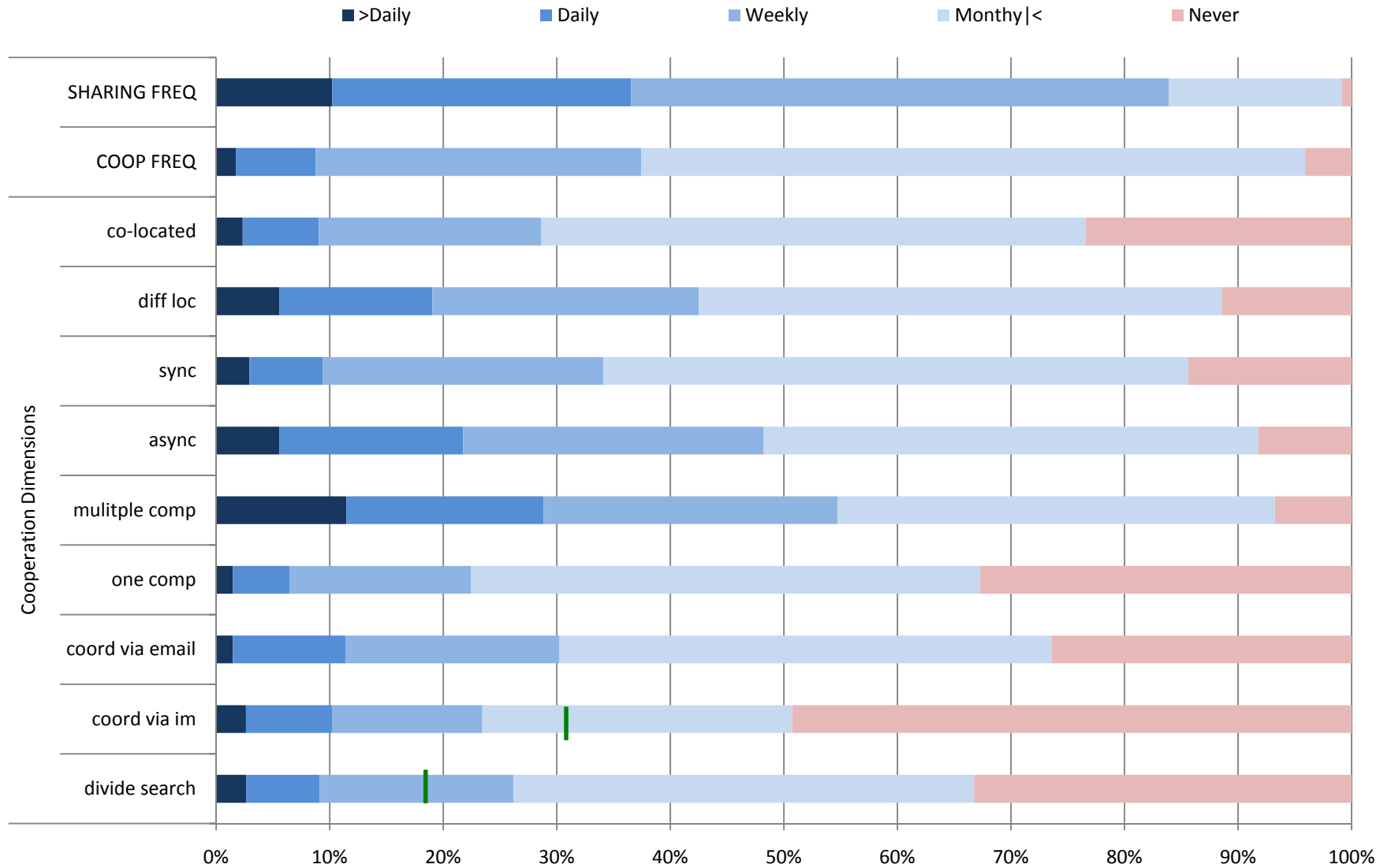


| = Morris 2008

Cooperative Searches



Cooperative Searches



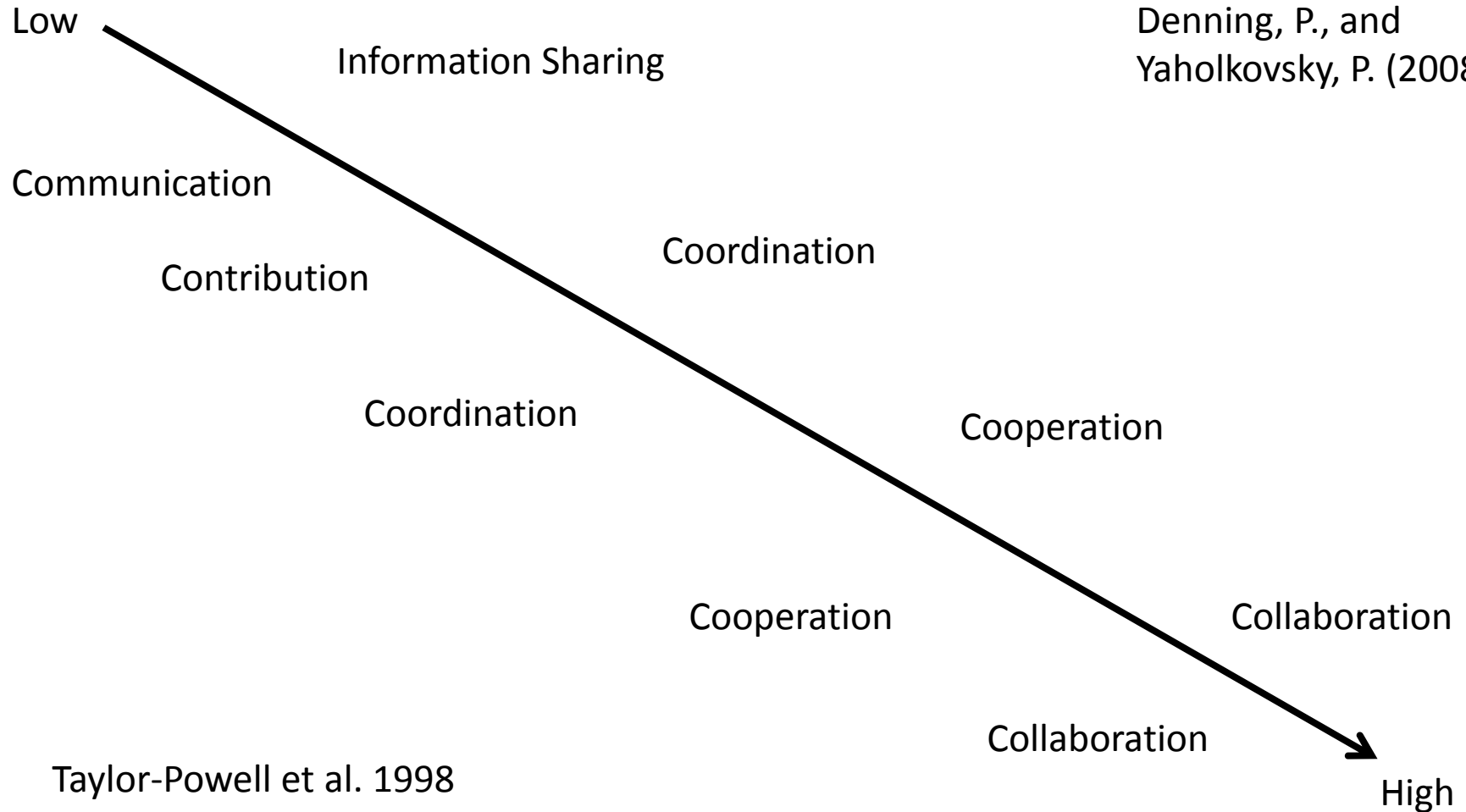
| = Morris 2008

Models, Frameworks, and Classification Schemes



| Authors | Topics |
|--|--|
| Twidale et al. (1997) | spatial, temporal; product vs. process peers or power differential |
| Hansen & Järvelin (2005) | sync/async; CMC or human-human tight or loose coupling |
| Golovchinsky et al. (2009) | intent, depth, concurrency, location implicit collab vs. explicit collab |
| Morris (2008) | process: co-location, IM, task division product: methods for collab |
| Morris and Teevan (2008) | group membership (implicit or explicit) group longevity (task-based v. trait-based) |
| Evans and Chi (2008) | social networks; shared social workspaces co-located search |
| Reddy & Jansen (2008) | triggers to go from individual → collab |
| Denning & Yaholkovsky (2008); Taylor-Powell et al. (1998); Shah (2008) | Levels of collaboration |

Levels of Collaboration



Examples of levels

Coordination involves information sharing and some planning and division of roles. There may be longer-term goals, but each party involved may have their own short term goals and retains some autonomy.

Example: Two people searching for free software, where one had asked the other for help – “Most of the work was coordinated through Facebook and the phone. He did most of the searching. I searched Google and Yahoo, he searched other sites. We sent each other links through Facebook.”

Examples of levels

Cooperation is a situation in which the parties involved have similar interests and work toward joint goals, but still maintain their own identities.

Example: Two people who wanted to buy the same purse – “I searched on one store website and my friend in another. Once we found something we liked she would give me the web address so I could see it and vice versa.”

Examples of levels

Collaboration involves parties with different perspectives, but who are working together as a group to extend what they could do individually.

Example: Two co-workers researching a legal case they were writing about – “One person typed, both people discussed what to search and what search option to choose.”

Example: A team planning to compete in an international solar car event – “It was a humongous task... We were each in charge of separate items to research. Work was divided based on past experience and interest.”

Categories from our data

- **Self-initiated sharing**
 - “Because I thought it was cool”
- **Perceived interest**
 - “We were discussing this earlier”
 - “He is an avid golfer as well”
- **Expressed interest**
 - “She asked for the information
 - “To help her with the paper.”
- **Explicit collaboration**
 - “We were looking to buy a new phone and we wanted some information”
 - “We were working on a project”

Two self/others dimensions

