

Colorado Adoption/Twin Study of Lifespan behavioral development & cognitive aging (CATSLife1)

OCCUPATION: CENSUS 2010 CODING
CODEBOOK

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Occupation Coding Review

Coding Guidelines for Tricky Occupations or Occupations Missing Titles

Description:

For the OnlineQ, participants were asked two open ended items pertaining to occupation: “What is the most important job you currently have?” and “What is the most important recent job you have had?” where participants freely responded. In cases where participants responded with more than one job title/occupation, responses were separated. Research assistants were then instructed to review each response and code the response to the appropriate U.S. 2010 Census Occupation Code by matching the response as best possible match to the associated Occupation Title.

A consensus meeting was organized to set final codes for occupation responses. Consensus members included the project PI, several graduate students, and lab manager. Original coded entries were reviewed for accuracy and under cases where disagreement existed between RAs on code assignment, consensus members chose the final assigned code.

Consensus Group Members

Chandra Reynolds
Shandell Pahlen
Fared Dungore
Chloe Myers

Associated Papers:

Literature for census code for homemaker. [To review details on decision.](#)

Foster, R. H., Kanotra, S., Stern, M., & Elsea, S. H. (2011). Educational and occupational aspirations among mothers caring for a child with Smith-Magenis Syndrome. *Journal of Developmental and Physical Disabilities*, 23(6), 501-514.

Motz, P. (2018). *Occupational exposure to metals and impact on dementia incidence*

Occupation Indices and Resources

[Census 2010 Industry Index](#) & [Census 2010 Occupation Index](#)

[O*Net](#)

Variable Table:**Datafiles:**

Long format: job_census_code_long_29JUL22.sav

Wide format: job_census_code_wide_29JUL22.sav

Logbook: LOGBOOK_Final Census Codes.docx

Table below corresponds to the long format

| Variable Name (link to tricky coding guidelines) | Item | Subscale | Value Label |
|---|--|-----------------|--------------------------------------|
| CLQ00001 | What is the highest year of school you have completed? | Education | Original Q- Edu |
| CLQ00005 | Do you currently have a job (paid or voluntary)? | Occupation | Original Q – Job |
| CLQ00006 | What is the most important job you currently have? (if you would rather not answer, please write n/a in the box) | Occupation | |
| CLQ00008 | What is the most important recent job you have had? | Occupation | |
| CLQ00009 | Rate your position at current job or if not currently employed, your most recent job. Which category best describes(d) your job? | Occupation | Original Q – Job Cat |
| job_lowercase | Participant response - The most important current or recent job | Occupation | Job |
| Census_2010code | 2010 Census Occupation Code (4 digit code) or SOC code if census unavailable (9 alphanumeric digits) | Occupation | Code |
| identifiable_job_title | Participant response is identifiable job title found and coded using 2010 Occupational Census Codes | Occupation | Job |
| nonidentifiable_job_title | Participant response - job title undisclosed coded to job category or additional review noted in scheme to code for occupation | Occupation | Job |
| homemaker_flag | Job listed in homemaker category | Occupation | Homemaker |
| job_num | Job number - Order of job if more than one listed by participant | Occupation | Job Num |
| job_type | Identifies whether job listed originally from CLQ00006 or CLQ00008 | Occupation | Job Type |

| | | | |
|--------------|--|------------|-------------------------|
| privacy_flag | Participant job response altered as original response may provide identifiable information | Occupation | Privacy |
|--------------|--|------------|-------------------------|

Item Values:

Original Questionnaire Items:

CLQ00001:

- 0 = less than high school diploma or GED
- 12 = high school or GED
- 13 = one year
- 14 = two years (Associate of Arts)
- 15 = three years
- 16 = four years, no degree
- 17 = five years or more, no degree
- 18 = bachelors
- 20 = masters
- 22 = advanced degree (e.g. doctorate, M.D., law degree)
- 999 = Would Rather Not Answer

CLQ00005:

- 1 = Yes
- 2 = No
- 999 = Would Rather Not Answer

CLQ00009:

- 1 = top executive; proprietor of a major business; professional requiring an advanced degree
- 2 = manager; proprietor of a medium business; professional requiring a college degree
- 3 = administrative personnel; small business owner; semiprofessional
- 4 = sales and clerical work; technician
- 5 = skilled manual worker
- 6 = machine operator and semiskilled worker
- 7 = unskilled worker
- 8 = homemaker
- 999 = Would Rather Not Answer

Job:

No scheme because response is open ended response. For these variables, the participants original response from CLQ00006 or CLQ00008 was preserved and separated if multiple jobs were listed. Jobs that were clear to code are listed under the variable “identifiable_job_title” while those that could not be coded based on the response alone are listed under the variable “nonidentifiable_job_title.” The nonidentifiable jobs are coded according to job rank, [see job rank and census alignment](#). For more information on coding protocol and decisions/rationale see “[General Guidelines for Occupations](#)” points 4 & 5, [specifically resolving RA disagreement and missing job titles](#).

Census 2010 Code:

Occupation titles in the [2010 Census Occupation Code](#) are classified by a 4-digit code. These are organized in 22 major subgroupings from “Management (0010-0430)” to “Transportation and Material Moving (9000-9750)”. We tried to match participant response to most appropriate job listing within the 2010 Census with the lowest level of specificity unless participant indicated otherwise. Example of non-specific response where code to non-specified (n.s.) industry occupation title:

Participant response “engineer”

2010 Census Occupation Code
1530

2010 Occupation Title
Engineer\n.s.

In rare cases where occupations were unable to be coded within the 2010 Census, the 6-digit code from the 2018 Standard Occupational Classification (SOC) displayed after searching an occupation using the Occupation Information Network (O*Net) Program (<https://www.onetonline.org/>). The 6-digit SOC code may also include a decimal point and additional digit(s) after the sixth digit to add greater detail to distinguish between occupations in a group (https://www.bls.gov/soc/2018/soc_2018_class_and_coding_structure.pdf). Example:

O*Net Search: Penetration Testers

SOC code: 15-1299.04

-99 = participant had response that could not be coded due to being too [ambiguous](#) (i.e. “my job”), non-specific reference to working in the [military](#) or being a [student](#).

Homemaker:

1 = Participant flagged to having a response that indicates being a homemaker, parent, significant other, and responses of a similar nature

Job Number:

The number represents the order if more than one occupation was listed by the participant.

Example:

Participant Response: “mother and social worker” job_num = 1 for “mother” and job_num = 2 for “social worker”

Job Type:

1 = current job (response from CLQ00006)

2 = recent job (response form CLQ00008)

Privacy:

1 = Participant flagged to having original response that could potentially be used to identify the participant. These participants’ original responses were altered to be less specific.

General Guidelines for Occupations Decisions:

If the occupation listed by the participant was “military,” “student,” “homemaker,” ambiguous or otherwise unclear, see the decision choices made by consensus group for these responses below. These are guidelines to help make consistent decisions for final census codes based on common response patterns leading to RA disagreement or missing codes. If enough information was provided by the participant then these guidelines were generally followed but are not strict decision rules for all cases. Some of the examples noted below are exceptions to the rule when typically, coding occupation. For example, if the job title is ambiguous or falls under the “nonidentifiable” category. Decisions are provided to note for why some “identifiable” job titles coded or may be set to missing.

Decision guidelines were reviewed by Chandra Reynolds, Robin Corley, Shandell Pahlen, Fared Dungore, and Chloe Myers.

1) How to code **military**

- a. Military occupations that are not codable within the census 2010
 - i. Example: military engineer, nurse, or cook
 - ii. Decision: Code the military title to a comparable civilian job
 - iii. Background resources
 - iv. All military occupations are categorized separately from civilian occupations (e.g., job family 55-0000). There is a limitation to use these codes, and these codes will not link up with O*NET indices of skill, knowledge, abilities, etc (e.g., occupation cognitive demand).
 1. Refer to SOC military occupation crosswalk, code based on civilian occupation equivalent
 - a. see <https://www.onetonline.org/crosswalk/MOC/>
 - b. or download file: [Military Occupational Classification \(MOC\) in MS Access, XLSX, CSV formats](https://www.onetcenter.org/crosswalks.html) (ZIP) from <https://www.onetcenter.org/crosswalks.html>
- b. If no recognizable job title is given, how do we code?
 - i. Example: “US army infantry” “Air Force officer”
 - ii. Decision: Refer to SOC occupation codes
- c. If only the military branch is given, how do we code these cases?
 - i. Example: “US army” “Air Force”
 - ii. Decision: Set to missing (-99)

2) How to code **homemakers**.

- a. Homemakers are not codable within the census 2010
 - i. Decision: Homemakers will be coded as SOC 39-9099: Personal care and service workers, all homemakers- census 2010 code: 4650
 - ii. Background surrounding decision
 - iii. A thesis by Motz (2018) used the SOC code 39-9099 (Personal care and service workers, all other for homemakers) to categorized homemakers.
 1. Motz, P. (2018). *Occupational exposure to metals and impact on dementia incidence*.

https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/42319/Motz_washington_0250O_18690.pdf?sequence=1&isAllowed=y

- iv. Further a study by Foster et al., (2011) found a large majority of self-identified homemakers noted their responsibilities fall under the Personal Care & related occupations major category (e.g., SOC code: 39-0000). Note this study was done with women.

- 1. Foster, R. H., Kanotra, S., Stern, M., & Elsea, S. H. (2011). Educational and occupational aspirations among mothers caring for a child with Smith-Magenis Syndrome. *Journal of Developmental and Physical Disabilities*, 23(6), 501-514.
<https://link.springer.com/content/pdf/10.1007/s10882-011-9241-5.pdf>

- b. Some homemakers are not parents, do we code them differently?
 - i. Example: “wife” “boyfriend”
 - ii. Decision: No, all homemakers or domestic partners are coded the same. There is no reason to assume there is a difference in responsibilities based on parental status. Further, it may introduction sex or age biases into coding decisions.

3) How to code **students**

- a. Students are not codable within the census 2010.
 - i. Decision: Set to missing (-99).
 - 1. Student is not considered an occupation and even if individuals are full-time students are carry a lot of responsibilities, we cannot presume they are similar to other non-codable responses like military professions or homemakers.
- b. Most participants that answer student also put in another job title. How do we code?
 - i. Example: “student. server”
 - ii. Decision: Only code to provided job title, as student is set to missing.

4) Common cases leading to dual entry disagreement:

- a. Only one RA coded the job but the RA other set title to missing
 - i. Example: “Labor”- one RA use the laborer census code
 - ii. Decision: Check the census code to see if it is appropriate. If it is lower tier for skill-based we can accept it. Otherwise, if still unclear then use occupational rank to code (CLQ00009).
- b. If job title is just a place of business but no title is given or responsibilities
 - i. Example: “Ikea”
 - ii. Decision: Use occupational rank to code (CLQ00009).
Note. If category missing or too high given lack of information (i.e. high CEO or high tier manager) then choose conservative lower-tier position such as retail service/customer service
- c. If the job title is too ambiguous to code or may be a joke response.

- i. Example: “i only have one job”
 - ii. Decision: Set to missing (-99).
 - 1. We may not be to take the response seriously, thus setting code to missing and will not use job rank to supplement.
- d. If we have two RAs, select similar but different appropriate codes.
 - i. Example: art instructor (one RA coded as art teacher but at the high school level and the other at the college level)
 - ii. Decision: If we don’t know the industry or level then we select the conservative level code
- 5) If the job title is completely missing but the participant answered CLQ00009.
 - i. Decision: Use occupational rank to code (CLQ00009)
- 6) How to code cases when job title and occupation rank is missing?
 - i. Decision: set to missing (-99)

CLQ00009 rank and matched Census 2010 code

“Rate your position at your current job or if not currently employed, your most recent job. Which category best describes(d) your job?”

- 1 = top executive; proprietor of a major business; professional requiring an advanced degree [census 2010: 0430]
- 2 = manager; proprietor of a medium business; profession requiring a college degree [census 2010: 0430]
- 3 = administrative personnel; small business owner; semi professional [census 2010: 0100]
- 4 = sales and clerical work; technician [census 2010: 4965]
- 5 = skilled manual worker [census 2010: 6260] [Ind code: 0770]
- 6 = machine operator and semiskilled worker [census 2010: 8965]
- 7 = unskilled worker [census 2010: 9620]
- 8 = homemaker [census 2010: 4650]

Further detail on census code description by occupation rank (CLQ00009)

1 = top executive; proprietor of a major business; professional requiring an advanced degree

Census title- Manager \ n.s.
Census Code- 0430

Industry- n/a

Industry title- \ any not listed

Notes- Crosswalks with 11-9199.00 - Managers, All Other on O*Net which doesn't provide additional details since too general a category. As typical, this code isn't unique and codes to other more specific census titles associated with industries (although most aren't in with this code) such as "Trustee," "Branch chief," etc.

2 = manager; proprietor of a medium business; profession requiring a college degree

Census title- Manager \ n.s.

Census Code- 0430

Industry- n/a

Industry title- \ any not listed

Notes- Crosswalks with 11-9199.00 - Managers, All Other on O*Net which doesn't provide additional details since too general a category. As typical, this code isn't unique and codes to other more specific census titles associated with industries (although most aren't in with this code) such as "Trustee," "Branch chief," etc.

3 = administrative personnel; small business owner; semi professional

Census title- Manager, administrative services

Census Code- 0100

Industry- n/a

Industry title- n/a

Notes- Crosswalks with 11-3012.00 - Administrative Services Managers on O*Net which does say "Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree." This code associated with few other census titles that are associated with industry codes such as "manager, customer service"

4 = sales and clerical work; technician

Census title- sales \ n.s.

Census Code- 4965

Industry- n/a

Industry title- \ any not listed

Notes- Crosswalks with 41-9099.00 - Sales and Related Workers, All Other on O*Net which doesn't provide additional details since too general a category. As typical, this code isn't unique and codes to other more specific census titles associated with industries (although most aren't in with this code) such as "Scalper," "Contact person," etc.

No option for a non-specified technician under census occupation codes because all are tied up to some specific industry whether related to healthcare, laboratory, medicine, etc.

5 = skilled manual worker

Census title- Skilled laborer

Census Code- 6260

Industry- 0770

Industry title- Far too many to list (563) but code does fall under specific grouping of “Construction (0770).”

Notes- Although specific to construction, by scanning the 563 industry titles does relate to many different skills and jobs and feel like next code that excludes construction completely limits it.

6 = machine operator and semiskilled worker

Census title- Machine operator \ n.s. or any specified type n.e.c.

Census Code- 8965

Industry- n/a

Industry title- \ any not listed

Notes- As typical, this code does apply to a lot of job titles too that fall under “production workers, all others” group.

7 = unskilled worker

Census title- laborer\ n.s.

Census Code- 9620

Industry- n/a

Industry title- \ any not listed

Notes- There is note in excel “Unskilled laborer--See "Laborer"” and since this is a very large and broad category, even though as typical there are other job titles associated with this code, seems to be the most nonspecific.

8 = homemaker

Census title- Personal Care and Service Workers, All Other

Census Code- 4650

Industry- n/a

Industry title- \ any not listed

Notes- A thesis by Motz (2018) used the SOC code 39-9099 (Personal care and service workers, all other) to categorized homemakers. Further a study by Foster et al., (2011) found a large majority of self-identified homemakers noted their responsibilities fall under the Personal Care & related occupations major category (e.g., SOC code: 39-0000). Note this study was done with women.

Foster, R. H., Kanotra, S., Stern, M., & Elsea, S. H. (2011). Educational and occupational aspirations among mothers caring for a child with Smith-Magenis Syndrome. *Journal of Developmental and Physical Disabilities*, 23(6), 501-514.

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