

Engineering, Science and Technology

These are people mainly concerned with the inanimate world, either as professionals or as assistants to professionals. They include scientists, engineers, technicians and technologists (except those in health) and computer specialists of various kinds.

The preference most likely to appear in all the samples is THINKING. Engineering and the sciences that deal primarily with the properties of inanimate objects use cause-effect relationships extensively; for this reason, one would expect to find more thinking than feeling types. Even female samples where feeling types are usually in the majority are likely to have a majority of thinking types in engineering and science. You might expect the feeling types in science to be come more interested in the aspects of sciences related to human beings rather than the inanimate world. Thus you might look for relatively more 'F's in the behavioral sciences and in teachers of science.

The second preference found in tables or this category is INTUITION. In samples of science students, intuitives are in the majority. However, there is a pattern that shows *relatively more sensing types in the sciences which depend on careful observation (e.g., botany, physiology, zoology) and relatively more intuitives in the sciences that rely heavily on theory (e.g., chemistry, physics).* We do not yet have large enough samples of practicing scientists to see if these trends hold true for them as well.

The more applied the science, engineering or technological activities, the more one expects to find relatively more EXTRAVERTS and SENSING types. For example, even in these small samples, chemical engineers have more E's and S's than scientists in chemistry.

The technicians tend to prefer sensing; but the research assistants are ore likely to prefer intuition.

Engineers: Electrical and Electronic N=54

37% Extraversion	63% Introversion
52% Sensing	48% Intuition
67% Thinking	33% Feeling
63% Judging	37% Perceiving

Technicians = Electrical & Electronic Engineering N=57

42% Extraversion	58% Introversion
56% Sensing	44% Intuition
68% Thinking	32% Feeling
64% Judging	36% Perceiving

Engineers – Mechanical N=77

47% Extraversion	53% Introversion
58% Sensing	42% Intuition
70% Thinking	30% Feeling
63% Judging	38% Perceiving

Technicians = Engineering & Science N=175

48% Extraversion	52% Introversion
55% Sensing	45% Intuition
58% Thinking	42% Feeling
56% Judging	44% Perceiving

Source: G. MacDaid, et.al, *Atlas of Type Tables*, Center for Applications of Psychological Type, Inc. 1986.



Art and Communication

Creativity implies the creation of something new that is not in existence. Intuition is the function that is directed more toward new possibilities than to present actualities, more toward the symbolic than to the real, and more toward imagination than to the practical. We would, therefore, expect intuitive types to outnumber sensing types here. (In the general population, we expect about 75% sensing types.)

The four types combining intuition and feeling are in theory the types most likely to be concerned with communication. Since the arts are a medium of communication, we expect more of the intuitives in this section to prefer feeling than thinking.

While types with intuition are expected to predominate in this category, the proportion of intuitives is expected to range from a very high percent for the most creative samples to a lower percent for samples where collecting and organizing data is important.

Editors and Reporters		N=113
46% Extraversion	54% Introversion	
32% Sensing	68% Intuition	
43% Thinking	57% Feeling	
43% Judging	57% Perceiving	

Journalists		N=52
58% Extraversion	42% Introversion	
29% Sensing	71% Intuition	
28% Thinking	62% Feeling	
38% Judging	62% Perceiving	

Musicians and Composers		N=136
60% Extraversion	49% Introversion	
35% Sensing	65% Intuition	
37% Thinking	63% Feeling	
52% Judging	48% Perceiving	

Artists and Entertainers		N=378
58% Extraversion	42% Introversion	
31% Sensing	69% Intuition	
44% Thinking	56% Feeling	
51% Judging	49% Perceiving	

Writers and Journalists		N=530
53% Extraversion	47% Introversion	
26% Sensing	74% Intuition	
43% Thinking	57% Feeling	
43% Judging	57% Perceiving	

Public Relations Workers & Publicity Writers		N=89
67% Extraversion	33% Introversion	
40% Sensing	60% Intuition	
48% Thinking	52% Feeling	
56% Judging	44% Perceiving	

Actors		N=62
63% Extraversion	37% Introversion	
19% Sensing	81% Intuition	
52% Thinking	48% Feeling	
45% Judging	55% Perceiving	

Architects		N=124
30% Extraversion	70% Introversion	
18% Sensing	82% Intuition	
56% Thinking	44% Feeling	
58% Judging	42% Perceiving	

Source: G. MacDaid, et.al, *Atlas of Type Tables*, Center for Applications of Psychological Type, Inc. 1986.

Business and Management

Look for **extraverts** in fields where there is constant communication with other people and activity away from the office. Look for **introverts** in occupations requiring quiet and concentration.

Occupations in business, industry, government and other organizations are expected to have **more sensing than intuitive types, as does the general population. However, more intuitive types may be found in occupations where it is important to be good at forecasting the unknown, to deal with complex abstract or theoretical models, or to be good at “reading between the lines.”**

Expect more **thinking** types in **production and planning management, and in oversight of tasks requiring production of mathematics.** Look for more **feeling** types in occupations where **friendly service is important.**

Expect samples of **managers at all levels to have more judging types than perceiving types.** Most samples of management have substantial numbers of the tough-minded **TJ** types with operational and production managers more likely to report **STJ** and long-range planning managers **NTJ**.

Administrators: Mgrs. & Spvrs N=3678

56% Extraversion	44% Introversion
58% Sensing	42% Intuition
64% Thinking	36% Feeling
68% Judging	32% Perceiving

Sales Workers N=1750

62% Extraversion	38% Introversion
56% Sensing	44% Intuition
46% Thinking	54% Feeling
55% Judging	45% Perceiving

Certified Public Accountants N=494

48% Extraversion	52% Introversion
65% Sensing	35% Intuition
78% Thinking	22% Feeling
74% Judging	26% Perceiving

Secretaries N=1604

49% Extraversion	51% Introversion
60% Sensing	40% Intuition
34% Thinking	67% Feeling
61% Judging	39% Perceiving

High Level Corporate Executives N=136

54% Extraversion	35% Introversion
57% Sensing	43% Intuition
90% Thinking	10% Feeling
75% Judging	25% Perceiving

Public Accountants N=333

46% Extraversion	54% Introversion
53% Sensing	47% Intuition
68% Thinking	32% Feeling
75% Judging	25% Perceiving

Secretaries: Exec. & Admin Asst.'s N=333

52% Extraversion	48% Introversion
56% Sensing	45% Intuition
44% Thinking	57% Feeling
62% Judging	38% Perceiving

Accountants N=427

45% Extraversion	55% Introversion
62% Sensing	38% Intuition
59% Thinking	41% Feeling
69% Judging	31% Perceiving

Receptionists N=100

62% Extraversion	38% Introversion
60% Sensing	40% Intuition
22% Thinking	78% Feeling
56% Judging	44% Perceiving

Managers & Administrators N=7463

57% Extraversion	43% Introversion
56% Sensing	44% Intuition
62% Thinking	38% Feeling
69% Judging	31% Perceiving

Source: G. MacDaid, et.al, *Atlas of Type Tables*, Center for Applications of Psychological Type, Inc. 1986.



Counseling and Mental Health

Look for sizeable numbers of **extraverts and introverts**; you expect more extraverts to be in jobs where treatment is active or time-limited

The preference **most expected in counseling samples is intuition, since this is the function that enables counselors to see patterns, meanings, and relationships of ideas and behavior.** For comparison, keep in mind that about 75% of the general population report a preference for sensing. Samples where the major effort is the counseling itself may have more intuitives than samples where considerable paper work is required to provide services (such as in vocational rehabilitation or social work.)

Expect **more feeling types**, and note especially the proportion of the samples that share NF.

Most health professionals have a majority of judging types. Counseling samples typically have fewer judging types than other health fields; they often have a **majority of perceiving types.** A hallmark of counseling is the ability to suspend judgment to be able to listen and understand.

Counselors – General N=359

56% Extraversion	44% Introversion
33% Sensing	67% Intuition
24% Thinking	76% Feeling
47% Judging	53% Perceiving

Counselors – School N=287

64 % Extraversion	36% Introversion
39% Sensing	62% Intuition
30% Thinking	70% Feeling
53% Judging	47% Perceiving

Psychologists N=289

49% Extraversion	51% Introversion
19% Sensing	81% Intuition
42% Thinking	58% Feeling
44% Judging	56% Perceiving

Social Workers N=479

51% Extraversion	49% Introversion
39% Sensing	61% Intuition
36% Thinking	65% Feeling
54% Judging	46% Perceiving

Source: G. MacDaid, et.al, *Atlas of Type Tables*, Center for Applications of Psychological Type, Inc. 1986.

