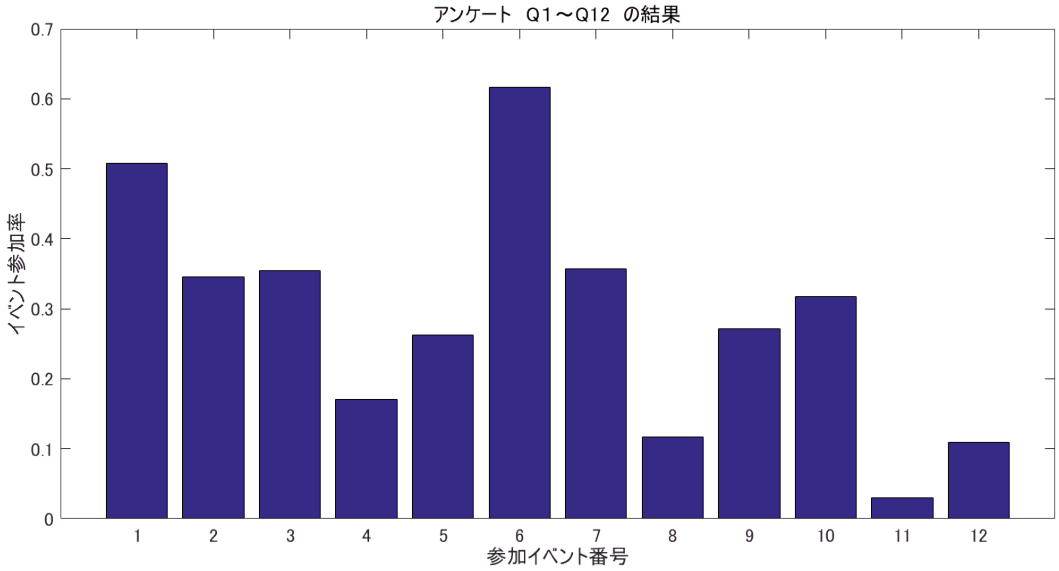
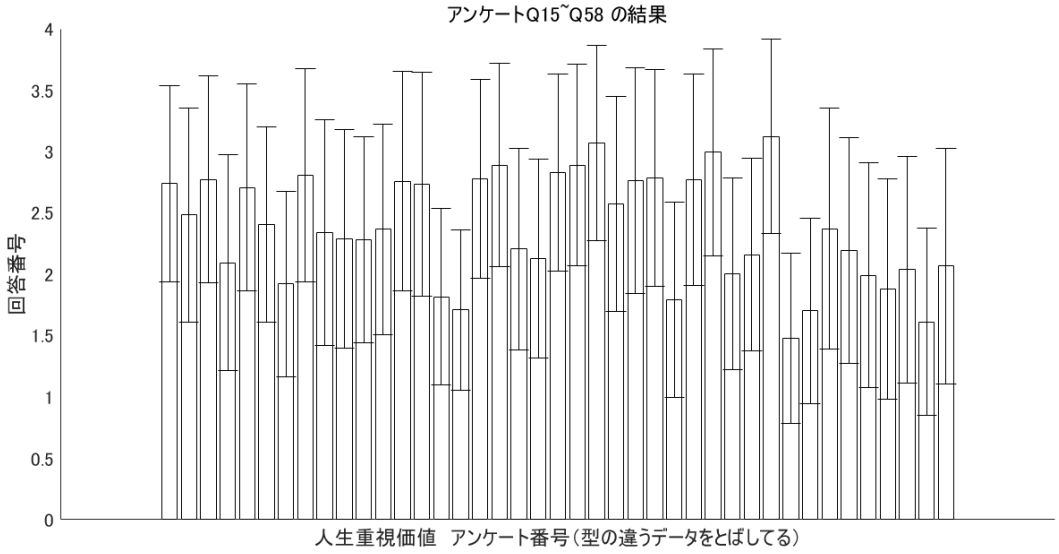
アンケートデータについて簡単にまとめる

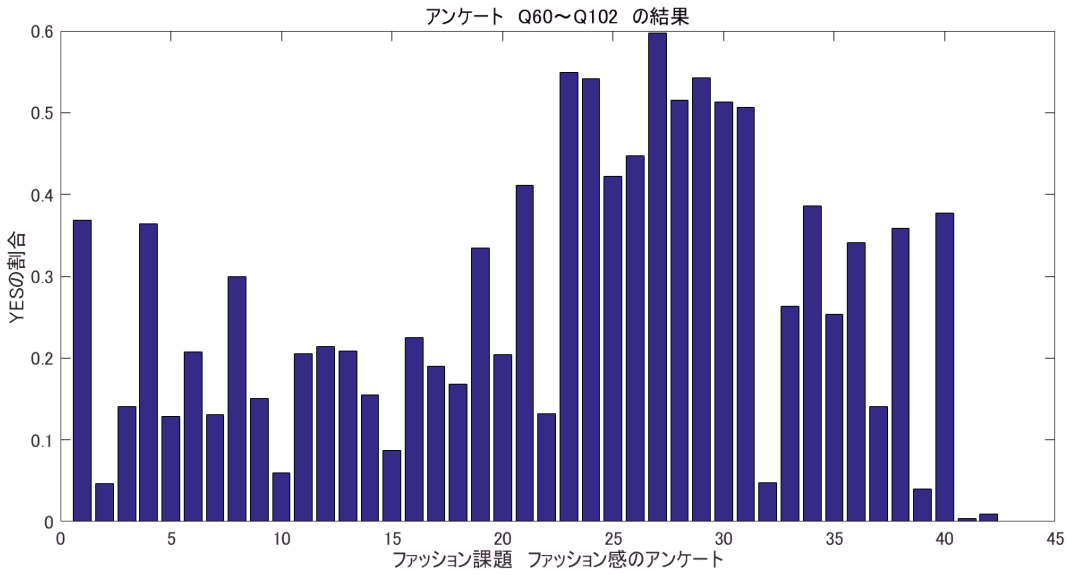
```
load('Data/ENQUETE.mat')%ENQUETE_5は１～５で答えるものだけ
open('figure/ENQUETE1_12bar.fig')
```




```
open('figure/ENQUETE15_58errorbar.fig')
```




```
open('figure/ENQUETE60_102bar.fig')
```

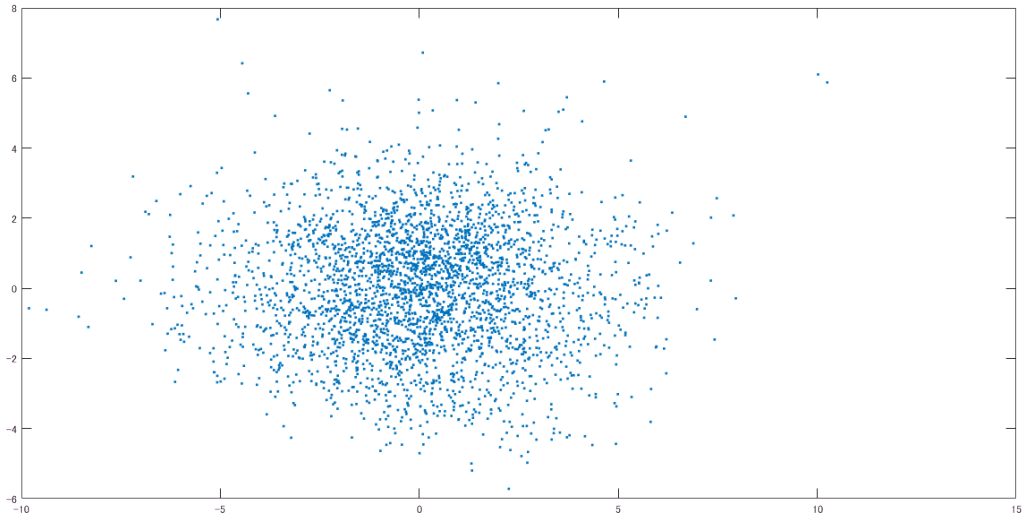



```
Z_ENQUETE=zscore(ENQUETE_5{:,:})
```

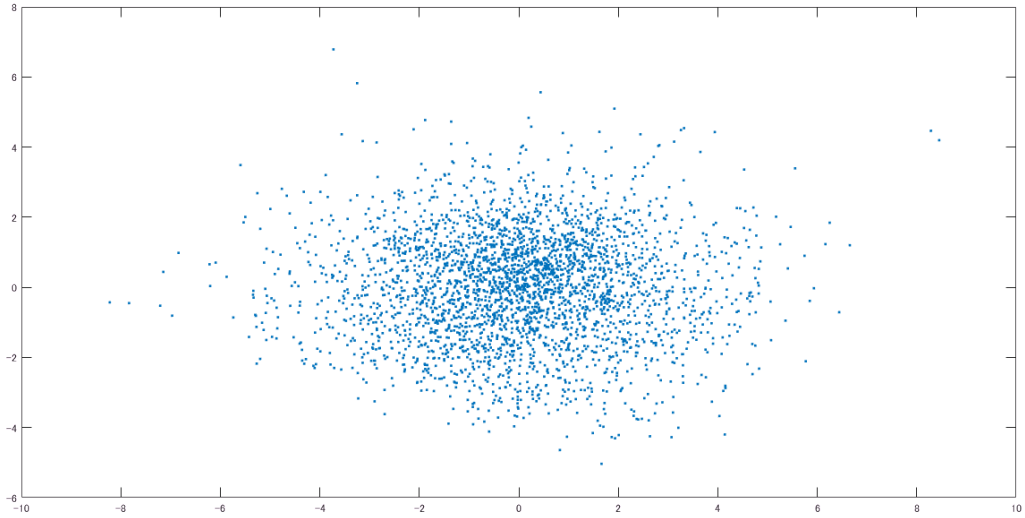
```
Z_ENQUETE = 3144x41 double

    0.3267   -0.5548    0.2711   -1.2444    0.3459   -0.5068    0.1057    0.2255 ···
    0.3267   -0.5548    1.4565    2.1705   -2.0209   -0.5068   -1.2129    1.3763
   -0.9243    1.7449    0.2711    1.0322   -0.8375   -0.5068    0.1057    0.2255
    1.5776    1.7449   -0.9143   -1.2444    1.5293    2.0023    1.4242    0.2255
   -2.1752   -0.5548   -0.9143   -0.1061   -0.8375   -0.5068    0.1057   -0.9253
   -2.1752   -1.7047    0.2711   -0.1061    0.3459    0.7478   -1.2129    0.2255
    0.3267    0.5951    0.2711   -1.2444   -0.8375   -0.5068   -1.2129    1.3763
   -0.9243    0.5951   -0.9143   -1.2444   -0.8375   -1.7613    0.1057    0.2255
   -0.9243   -0.5548    0.2711   -0.1061    0.3459   -0.5068    0.1057    1.3763
    0.3267    0.5951    1.4565    2.1705    1.5293    2.0023    0.1057    1.3763
     ⋮
     ⋮
```

```
D = pdist(Z_ENQUETE,'euclidean');
[Y,e] = cmdscale(D);
plot(Y(:,1),Y(:,2),'.')
```



```
D2 = pdist(ENQUETE_5{:,:},'euclidean');
[Y2,e2] = cmdscale(D2);
plot(Y2(:,1),Y2(:,2),'.')
```



```
[pc,score,latent] = pca(ENQUETE_5{:,:})
```

pc = *41x41 double*

0.0832	-0.0876	-0.2180	-0.0731	-0.1057	0.1900	-0.2516	0.2446 ···
0.0229	0.0203	-0.0729	0.1438	-0.1802	0.1917	-0.1318	0.4882
0.1170	-0.1383	-0.0235	0.2906	-0.1419	0.2484	-0.2836	0.0339
0.1287	0.0912	0.0273	0.1246	-0.3564	0.2662	-0.0339	-0.1271
0.1846	-0.0707	-0.2099	0.0746	-0.1983	0.0247	0.1441	-0.2956
0.1341	-0.0125	-0.1699	0.0629	-0.1306	0.0232	0.3036	-0.1801
0.0369	-0.0136	-0.0584	0.1381	0.1217	0.1323	0.1767	0.0497
0.0982	-0.1094	-0.0545	0.4185	-0.0851	-0.0236	-0.1350	-0.0792
0.0180	-0.0755	0.0166	0.2728	0.2540	0.4814	0.1812	-0.0098

```
    0.0873    0.1850   -0.0049   -0.0883   -0.3404   -0.2164   -0.1708    0.0932
     ⋮
```

score = *3144x41 double*

```
    0.1289   -0.0870   -0.2093    0.2997   -0.5917   -1.0440   -0.4011   -0.4003 ···
   -4.0445   -0.4834   -1.9302    1.2320   -2.1904    0.2319   -0.9617    0.7512
   -1.5820    0.3678    0.3359    1.6416   -1.8755    1.2619    1.7339    0.2825
    1.0931    1.2574   -0.9412    0.2542   -0.0399    0.6024    1.0176    0.1327
   -2.5108    1.4625    0.2424    0.4359   -0.0768   -0.4546    1.8329   -0.4066
   -0.2532    1.0640    0.3294   -1.1456    0.4805    1.5226    1.5829   -2.1541
    0.1709   -2.6986    2.9274    0.1052   -0.1054    1.0877   -0.6921    0.2504
   -1.7108   -0.4304    0.7196    0.3940    0.1043    0.0192    0.1315    0.2364
    1.7820    0.8885    0.2043    1.3976    0.2538   -0.4826    0.8048    0.1250
    0.3615    0.7508   -2.3424    2.1146   -1.6853    0.9822    0.3517   -0.3803
     ⋮
```

latent = *41x1 double*

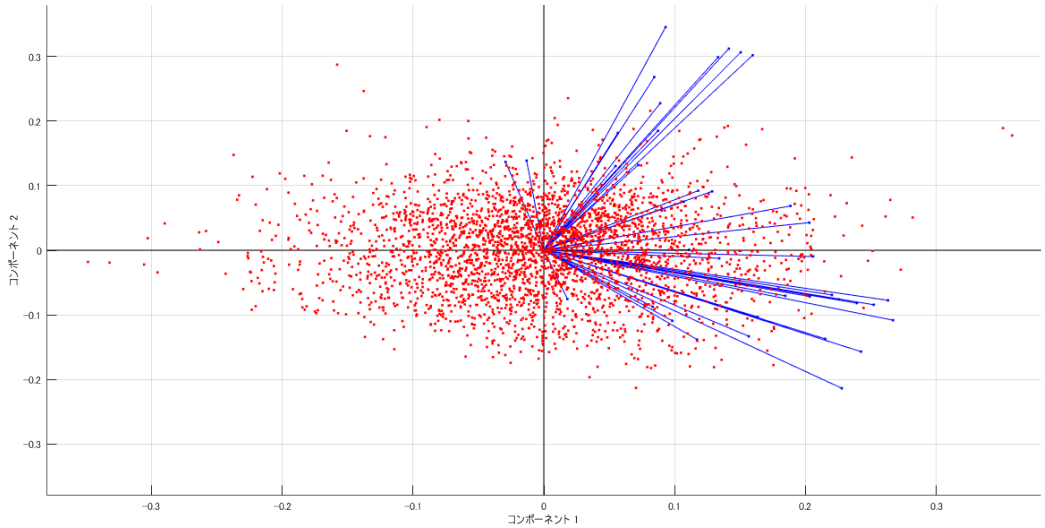
```
    4.0807
    2.4466
    1.7364
    1.2528
    1.1659
    1.0787
    1.0386
    0.9183
    0.8422
    0.8105
     ⋮
```

```
R2 =cumsum(latent)./sum(latent)
```

R2 = *41x1 double*

```
    0.1405
    0.2247
    0.2845
    0.3277
    0.3678
    0.4049
    0.4407
    0.4723
    0.5013
    0.5292
     ⋮
```

```
biplot(pc(:,1:2),'Scores',score(:,1:2))
```




```
[pc2,score2,latent2] = pca(Z_ENQUETE)
```

pc2 = *41x41 double*

0.0892	-0.0892	-0.2433	-0.1605	-0.2623	-0.1033	0.2190	-0.2479 ···
0.0225	0.0272	-0.0946	0.0943	-0.1566	-0.1845	0.2092	-0.2583
0.1174	-0.1485	-0.0548	0.2320	-0.2918	-0.1152	0.3103	-0.0028
0.1203	0.0975	0.0088	0.1066	-0.1855	-0.3306	0.1583	0.1665
0.1818	-0.0600	-0.2416	0.0183	-0.0095	-0.1702	-0.0370	0.4148
0.1428	0.0077	-0.2255	0.0217	0.1839	-0.1671	-0.0039	0.4091
0.0426	-0.0044	-0.1075	0.1195	0.2542	0.0752	0.3044	-0.0106
0.0929	-0.1138	-0.0980	0.3589	-0.1546	-0.0025	0.0422	0.0926
0.0182	-0.0647	-0.0104	0.1503	0.1613	0.0778	0.4694	-0.0044
0.0758	0.1823	0.0001	-0.0217	-0.2422	-0.1751	-0.2742	-0.0629
⋮							

score2 = *3144x41 double*

0.1868	-0.5024	-0.3757	0.7038	-0.3590	-0.4138	-1.4466	-0.7641 ···
-4.9290	-0.6451	-2.3738	1.2900	-1.9103	-1.9718	-0.2270	-0.4477
-1.6860	1.1532	-0.0561	2.1195	1.0584	-2.8865	0.8929	0.2028
1.2525	1.5177	-1.2648	-0.3566	1.0664	-0.6441	0.8596	0.9509
-2.8686	1.9735	0.1105	1.0482	2.0305	-0.6861	-0.8249	-0.0244
-0.2169	1.4929	0.8845	-1.6928	1.9462	-0.9567	1.0428	2.4095
0.3118	-3.2300	3.3283	0.0470	-1.0474	-0.2332	1.1926	0.5064
-2.0122	-0.6166	0.7264	0.7753	-0.0738	0.2302	-0.0770	-0.8149
2.2528	1.3539	-0.1565	2.1018	1.0020	-0.0387	-0.6630	-0.8567
0.2615	1.1543	-3.2495	1.8519	-1.0655	-1.4341	0.8055	1.3876
⋮							

latent2 = *41x1 double*

5.8963
3.2023
2.3175
1.7982
1.5591
1.5107
1.4454
1.3393
1.2401

```
    1.1671
    ⋮
```

```
R2_2 =cumsum(latent2)./sum(latent2)
```

```
R2_2 = 41x1 double

    0.1438
    0.2219
    0.2784
    0.3223
    0.3603
    0.3972
    0.4324
    0.4651
    0.4953
    0.5238
    ⋮
```

```
biplot(pc(:,1:2),'Scores',score(:,1:2))
```