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Help File: Look At Association Pairs

A. Data on Associations

1. Overview

The associations explored in Association Pairs are of two types—kinship and social relationship—and come in many varieties and degrees of complexity. CBDB accordingly has developed data structures flexible enough to record the most important components of these associations.

(a) Simple Non-kinship Associations

These have a three-part structure: person + association + associate. The major challenge in recording the non-kinship **Associations** that individuals formed over their lives is to control the proliferation of categories.

Because associations are between pairs of people, there must be symmetrical types of associations. That is, if {**A** "is the student of" **B**} is in the database, then {**B** "is the teacher of" **A**} also should be so. In fact, the current version of the program automatically generates this second entry. Thus associations as an entity (in contrast to any particular instance of the association between people) have an internal structure:

Association type
Paired Association type
Description of the Association (Chinese and English)
Association Categories/subcategories (3 levels at present)
Roles in association (agent/recipient or mutual)

When one creates a new category of **Association**, one must also create its converse. Mutual associations, of course, are their own converse: {**A** "is friend of" **B**} is the same as {**B** "is friend of" **A**}. In most associations, however, the two people play distinct roles, and CBDB needs the converse category to capture the roles of the two people from their different perspectives: to record for **A** that {**A** "followed" **B**} also means that for **B**, {**B** "was followed by" **A**}. In this example, **A** is playing the active part of agent in creating the association (**B**, as recipient, may not even be aware of **A**'s presence among his/her followers): CBDB records this distinction and, when pruning records during searches in **LookAtNetworks**, chooses the record where the first person is the agent. Some associations are not dyadic because the relation is not to a person but to a more abstract or general object. The most important type of association of this type is the faction. Thus we have {**A** "is member of the purged Yuanyou group" \emptyset } (\emptyset here is the *Null* (Empty) element.) A few rare relations are **triadic**: {**A** "ordered" **B** "to execute" **C**}. CBDB has added a third field to capture such situations but does not yet process such triadic relations in its analytic routines.

(b) Mediated Associations

In some important cases, associations form through the mediation of institutions or people who can be either associates or kin. CBDB captures these types of relations by adding additional data to associations concerning the mediating institution or person. For example, we might know of a relation between X and Y because X asked Y to write a biography for his mother's tomb.

(c). Kinship Relations

The building-block relations used to describe kinship are 9 basic categories:

```
e Ego (the person whose kinship is being explored)
```

F Father

M Mother

B Brother

Z Sister

S Son

D Daughter

H Husband

W Wife

C Concubine

There are also variations on the nature of the relationship, as well as additional types of notation to represent types of kinship relations beyond the nuclear family:

+	Older (e.g. older brother B+, 兄)
_	Younger (e.g. younger sister Z-, 妹)
*	Adopted heir (as in S*, adopted son)
0	Adopted
!	Bastard
^	Step- (as in S ^ step-son)
1/2	half- (as in $\mathbb{Z}^{1/2}$, half-sister)
~	Nominal (as in $M\sim$, legitimate wife as nominal mother to children of concubine)
%	Promised husband or wife (marriage not completed at time of record)
У	Youngest (e.g., Sy is the youngest known son)
1, 2, 3	Numbers distinguish sequence (e.g., S1, S2 for first and second sons; W1, W2 for the first and the successor wives)
n	precise generation unknown
G-#, G+#	lineal ancestor (-) or descendant (+) of # generation
G-n, G+n, Gn	lineal kin of an unknown earlier generation (G-n), or unknown later generation (G+n), or unknown generation (Gn)
G-#B, BG+#	a brother of a lineal ancestor of # generation; a brother's lineal descendant of # generation
K, K-#, K+#, Kn	Lineage kin, of the same, earlier (–), later (+) or unknown (n) generation. CBDB uses "lineage kin" for cases where kinship is

attested but the exact relationship is not known. Lineage kin are presumably not lineal (direct descent) kin.

K-, K+

Lineage kin of the same generation, younger (-) or elder (+).

P, P-#, P+#, Pn

Kin related via father's sisters or mother's siblings, of the same, earlier (-), later (+) or unknown (n) generation. Signified by the term biao (表) in Chinese. (CBDB uses these codes only when the exact relationship is not known).

P-, P+

Kin related via father's sisters or mother's siblings, of the same generation, younger (-) or elder (+).

Affine/Affinal kin, kin by marriage

2. Structure of an Association Record

Because associations in pre-modern Chinese society often are complex, the table tracking associations in CBDB uses a correspondingly large number of fields:

Basic Information for Both Kinship and Social Relations

- 1. Person
- 2. Associated person
- 3. The association
- 4. The number of objects or events establishing the association

KINSHIP AND OTHER RELATIONS THAT MAY PLAY A ROLE IN SOCIAL ASSOCIATIONS

- 5. The kinship relation, if the association was established through a relative of the person
- 6. The person whose kinship relation established the association
- 7. The kinship relation, if the association was established through a relative of the *associated* person
- 8. The kin of the associate through whom the association was established
- 9. The name of the person who claimed the existence of the association: for example, a son claiming it for his father

Time and Place of the Association

- 10. The place of the association
- 11. The sequence of an association, if one does not know the actual date
- 12. The date of the association (year, month, and day, if known)

CONTEXTUAL INFORMATION

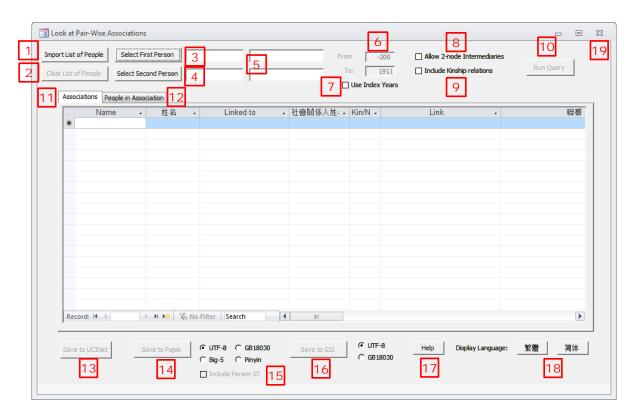
- 13. The social institution at or through which the association was established
- 14. The occasion on which the association was established
- 15. The genre of the writing that establishes the association, if relevant
- 16. The title of the work that established the association, if relevant
- 17. The scholarly topic around which the association was formed

Source and Notes

- 18. Source
- 19. Note

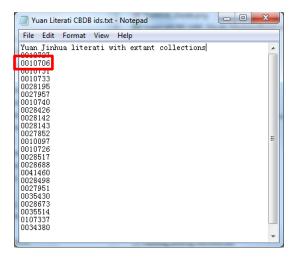
B. The Interface

At times one wants to consider whether there were any social links between two individuals or among members of a group of people identified through criteria other than those of kinship or social network. One could use **LookAtNetworks** to generate the social network of one person and see at what point the other person or people appear as part of the network. However, the Access version of CBDB provides a tool, **LookAtAssociationPairs**, to directly examine if there were any people who connected the target individuals as intermediaries. The form discovers not only those intermediaries but also all the associations linking the intermediaries to one another.

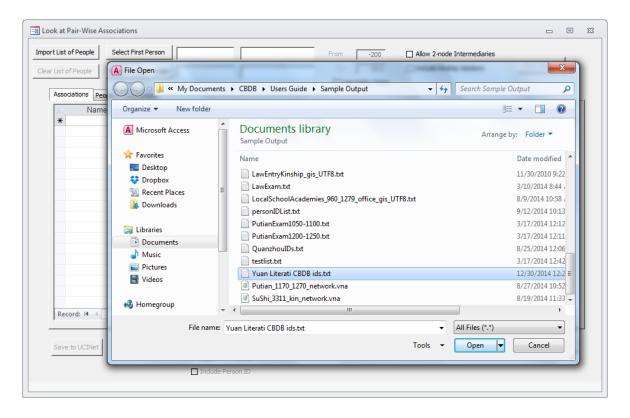


1. Import List of People Command Button

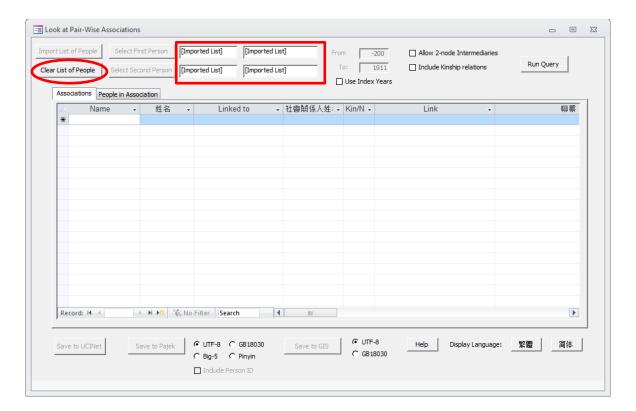
One very useful way to explore the degree of interconnection within a group of people identified through one of the other forms is to import that group of people into **LookAtAssociationPairs**. For example, one could start with people from Jinhua in Wuzhou during the Yuan dynasty who left literary collections. On creates a query through the Query Builder in Access to join people who have *wenji* who are from the Yuan with people who are from Jinhua. One can copy the results of the query to a **text** file (a .txt file can be created in Word or Excel) and edit the results:



Note that one can include a line with a label as well as other textual information: the program will simply ignore this line. One can use tabs or commas to delimit fields. The **one crucial datum** that CBDB extracts from each line is the Person ID which *must be the very first item of the line*. One clicks on the **Import People** command button and selects the file:



If **LookAtAssociationPairs** successfully reads the file, the form will look like:



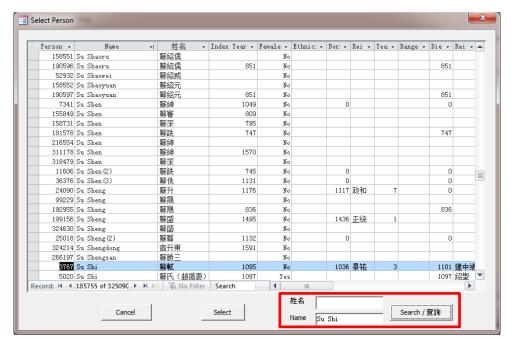
The four boxes that give the selected people's name in *pinyin* and Chinese will state "[Imported List]."

2. Clear List of People Command Box

If one initially imported a group of people to explore but then wants to clear the list, one clicks on the **Clear List of People** command button.

3. Select First Person Command Button

If one wants to look at the people who mediate the associations between two particular people, rather than within a group, one selects the people by clicking on the **Select First Person** and **Select Second Person** command buttons. When one clicks on **Select First Person**, the form opens a list of people:



One can search for a person using either Chinese characters or *pinyin*. (Note that sometimes, for a search on a second use of the form, the form finds an unrelated person. It finds a correct person if one simply clicks **Search** again to reset the results.)

Once one has found the desired the person, one clicks on the **Select** command button.

4. Select Second Person Command Button

To select the second person, one repeats the process by clicking on the **Select Second Person** command button.

5. Selected People Text Boxes

The **LookAtAssociationPairs** form displays the names of the selected people in Chinese and *pinyin* (or "Imported List") in these four text boxes. The user cannot directly type a person's name into these boxes.

6. From & To Years Text Boxes

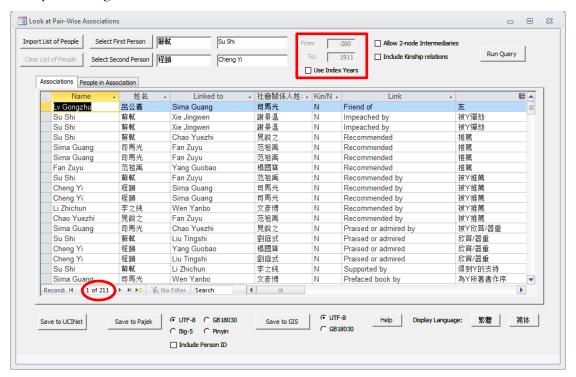
One uses these text boxes to fill in the beginning and ending years for the *index years* of people to be considered for the search. (See the discussion of index years below.)

7. Use Index Years Checkbox

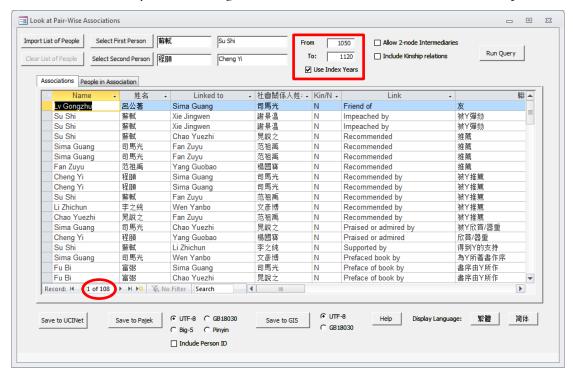
A person's *index year* is when the person would have turned 60 (Western years) or when the person died, if it is known and less than 60. In many cases, CBDB does not have information about birth year or death year and must generate estimated index years based on other criteria. (Please see the discussion of these criteria in the User's Guide.) However, it remains the case that there are many people to whom CBDB was not able to give an index year. *These people cannot be included in any search that uses index years to filter the results*. Therefore it may prove useful

to perform a search once with the specified target years active and another with **Use Index Years** disabled.

For example, if one looks for one-node intermediaries between the Northern Song cultural figure Su Shi and his contemporary, the *Daoxue* scholar Cheng Yi without restricting the index year, one gets 211 associations in the network:

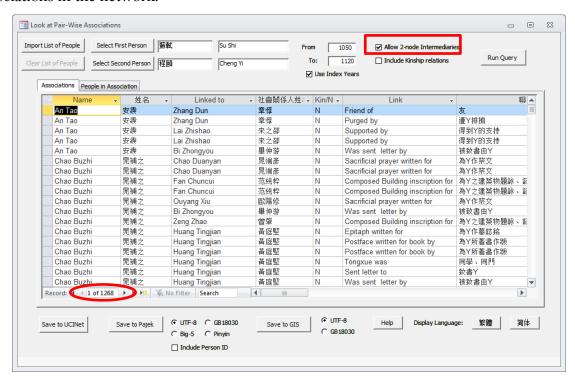


If one restricts the index years to a range between 1050 and 1120, the number drops to 108:



8. Allow 2-Node Intermediaries Check Box

Permitting the search for intermediaries to include not just those directly connected to the selected target people (i.e. A—X—B), but those that provided a connection at a two-node distance (i.e. A—X—Y—B) greatly increases the number of connections. Using the example of Su Shi and Cheng Yi with the index years restricted to 1050-1120, one finds 1268 associations in the network.

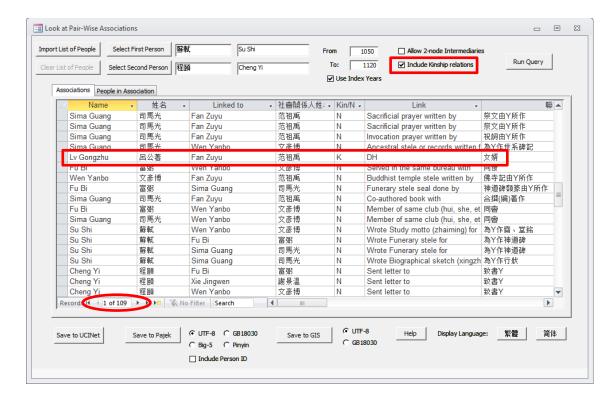


To enable this search mode, one clicks on the **Allow 2-node Intermediaries** check box.

9. Include Kinship relations Check Box

Kinship networks can plan an important and intersecting role with social networks in linking people to one another. Therefore it is important to be able to consider not just direct kinship ties linking people but also whether the kin of person A also served as a social associate of person B. This form allows one to explore precisely this possibility, at both the one-node and two-node distance. For one-node intermediaries there are four possible combinations of types associations (A-social-X-social-B, A-social-X-kin-B, A-kin-X-social-B, A-kin-X-kin-B), while for two-node intermediaries, there are eight.

For the example of Su Shi and Cheng Yi (one-node only, with index years restricted to 1050-1120), if one then includes kin of either Su Shi or Cheng Yi who have a social connection to the other, then one discovers only one additional connection but no additional people:



To enable the inclusion of kinship relations in the search, one click on the **Include Kinship relations** check box.

10. Run Query Command Button

When one has set all the desired constraints, one clicks on **Run Query** to perform the search.

11. Associations Table

(a) Overview

The search routine produces three different tables. The first is the **Social Network Relationship** table. This table lists all the relevant association records as they appear in the data source tables. If two people are linked by a variety of different associations, this table lists all of these associations as separate records. The next is **People in Social Network**, a table listing all the people involved in the associations listed in the **Social Network Relationship** table. Finally, there is **Aggregated Social Relations** table that groups the all the associations between each pair of people into a single record. (See the separate entry below for details.)

(b) Structure of the **Associations** Table

This table has thirty columns:

Basic Biographical Information:
ID of Person
Name of Person (pinyin and Chinese)
Index Year of Person

Sex of Person

Address of Person (pinyin and Chinese)

Address Type (English and Chinese)

XY-Coordinates of Address

Node ID: ID of Associate

Node Name: Name of Associate (pinyin and Chinese)

Node Index Year: Index Year of Associate

Node Sex: Sex of Associate

Node Address: Address of Associate (pinyin and Chinese)

Node Address Type: Address Type of Associate Address (English and Chinese)

Node XY: XY-Coordinates of Associate Address

Information on the Association

Kinship/Non-kinship Association (**K** or **N**)

Association (English and Chinese)

Association Count (e.g., if X wrote Y ten letters with the same title, Count =10)

Text Title (if an association is through a known text, CBDB gives the title)

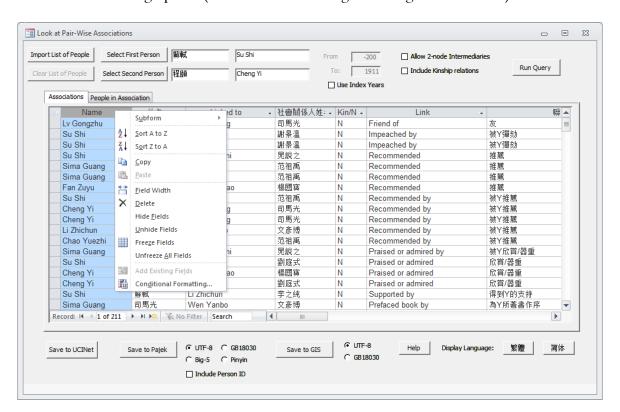
Association Node Distance

Notes

Geographic Distance (great-circle arc distance in kilometers between the addresses)

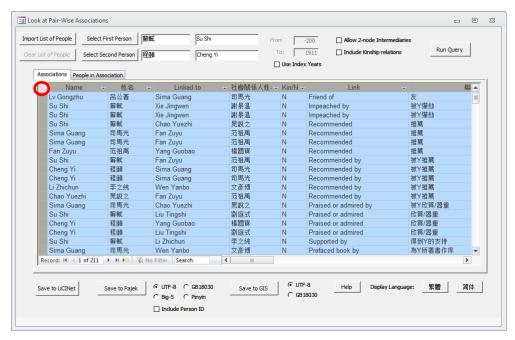
(c) Sorting the Table

One can **sort** the table using any of these columns. "Name," for example, may be useful. *Left-Click* on the small triangle (∇) on the right in the column name of the desired column and then choose the sorting option (either smallest to largest or largest to smallest):



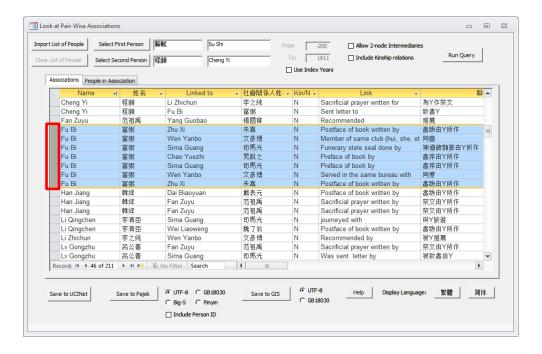
(d) Exporting the Search Results

If one wishes to export the results of a search, one can click on the square in the upper left-hand corner of the table to select all the records in the table:



One can then copy the table in the usual manner (**Ctrl-c**), open **Excel** (or any other compatible *spreadsheet* software) or create a new *text* file and open it with **Notepad** (or any preferred software) and paste the results (**Ctrl-v**).

One also can select a specific block of records to copy by left-clicking on the left-hand column of the table, holding the mouse-button down and dragging to copy the block. Here all the records with Fu Bi in the first column are selected:

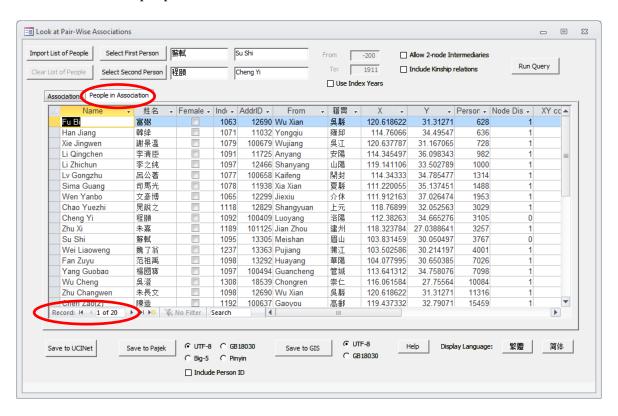


Once one has selected the desired records, one can use **Ctrl-c** to copy and **Ctrl-v** to paste them into a text file, an Excel spreadsheet, or another compatible file.

12. People in Associations Table

(a) Overview

The **Associations** table lists 211 non-kinship relations among the one-node intermediaries between Su Shi and Cheng Yi when not filtered by index year.. The **People in Associations** table then lists the 20 people involved in these 211 associations:



(b) Structure of the Table

People in Associations has fourteen columns:

Name (pinyin and Chinese)

Female (a checkbox)

Index Year

Address ID

Address (pinyin and Chinese)

XY-Coordinates of Address

 $I\Gamma$

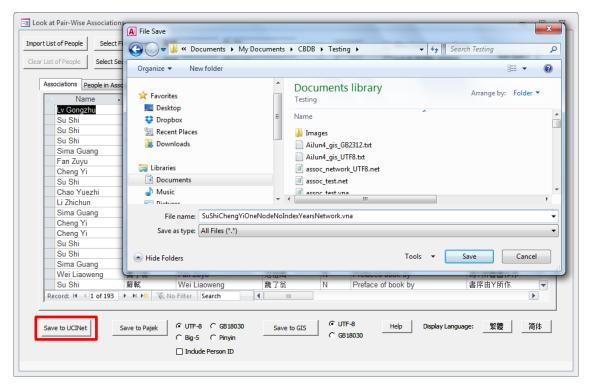
Node distance (from the initially selected person or persons)

XY Count: the number of people sharing the same XY coordinates

Address Type (English and Chinese)

13. Save to UCINet Command Button

LookAtAssociationPairs provides ways to output the results of a query to two different SNA programs: **UCINet** and **Pajek**. UCINet is one of the most widely used format for social network analysis (SNA) programs. The procedure for saving the network relations for a person in UCINet form is to click on the **Save to UCINet** button opens a Windows "File Save" window:



One selects the location and provides a file name (the default extension is .vna) and clicks on the Save button. For UCINet, CBDB provides the following information:

```
For nodes (people)

CBDB Person ID

Name in pinyin

Index year

Sex

Node distance from target person

XY coordinates

Node color (based onnode distance)

For edges (the association relationship)

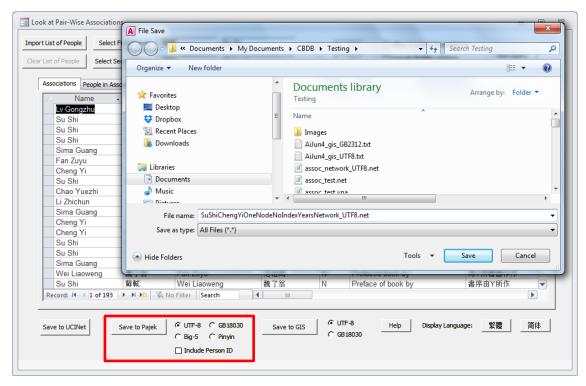
Association code (K+code or N+code)
```

The default display for nodes in the SNA output files (and for edges in Pajek and Guess) uses color-coding to indicate degree of distance from the target person:

```
White = the target node (the UCINet files set these to Black)
Blue = nodes at a summed distance of 1
Green = nodes at a summed distance of 2
```

14. Save to Pajek Command Button

Pajek (along with UCINet) is perhaps the most broadly used SNA file format. CBDB allows files for Pajek to be saved in different text encodings to enable the use of Chinese characters. Depending on whether the user is in a Chinese Windows environment or an English will determine whether to use GB18030 (Chinese) or UTF-8 (English) encoding for the Chinese characters. As noted above, there also is an option to include the *Person ID* with the node information in the Pajek files. Once the user has selected the appropriate options and clicks on **Save to Pajek**, a window will open for the user to choose the name and location of the Pajek file. The default extension is ".net:"



The information saved in a Pajek file is more limited than for UCINet:

For the nodes (people)

Name in Chinese or pinyin, depending on one's selection

Node color based on node distance from target person

CBDB Person ID, if selected

For the edges (relationships)

Association

Edge color based on edge distance from target person (or people)

15. Include Person ID Checkbox

Because a person's name may not be a unique identifier in the SNA output files, CBDB allows the user to include the CBDB person ID in the label of the nodes as well as the name. Checking the **Include Person ID** Checkbox enables this function

16. Save to GIS Command Button

Data on association have a geographic component and may reveal significant geographic patterns of distribution that shift over time. In order to allow the user to explore this geographic component, CBDB exports the GIS (Geographic Information Systems) data to a commonly used file format (tab-delimited text) that can be imported into such programs as ArcGIS and QGIS.

Depending on whether the user is in a Chinese Windows environment or an English will determine whether to use GB18030 (Chinese) or UTF-8 (English) encoding for the Chinese characters. When **LookAtNetworks** saves the file, the record for each person includes the following fields:

Name (Pinyin and Chinese)

Sex

Index Year

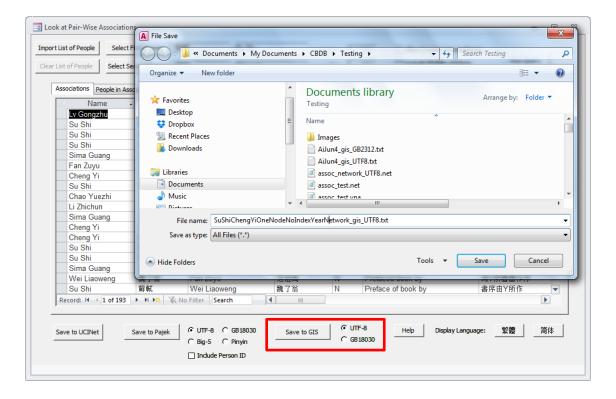
Node distance

Place Name (Pinyin and Chinese)

XY coordinates

XY count (the number of people in the table who share the same coordinates)

To save the data to a GIS file, select the appropriate encoding and click on **Save to GIS**. This will open a standard Windows "Save-to" window. Note that the default extension is ".tab" and if the user gives the file a different extension, CBDB will automatically append ".tab" to the file name.

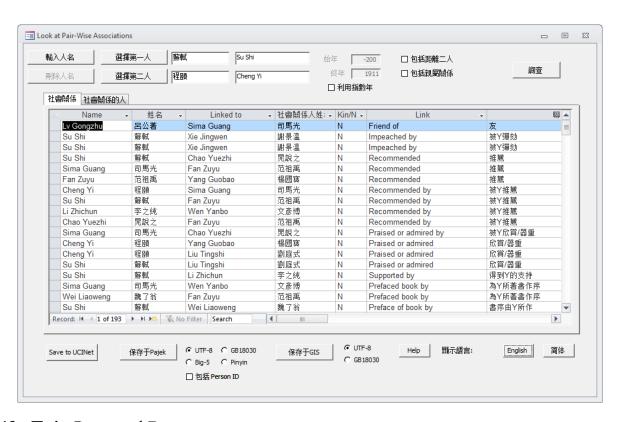


17. Help Command Button

The **Help** command button opens this file.

18. Display Language Command Buttons

Note that all of the forms have the option to switch the display labels among English, traditional or simplified Chinese. When one click on the "繁體" command button, all the form labels switch to traditional Chinese text (except those that are parts of bilingual pair, like "Name" and "姓名" in the table of results), and the button gives one the option to return to English:



19. Exit Command Button

To close the form, one clicks on the **Exit** command button (or on the x in the upper right corner)