

Record Linkage*

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EACH person in the world creates a Book of Life. This Book starts with birth and ends with death. Its pages are made up of the records of the principal events in life. Record linkage is the name given to the process of assembling the pages of this Book into a volume.

The Book has many pages for some and is but a few pages in length for others. In the case of a stillbirth, the entire volume is but a single page.

The person retains the same identity throughout the Book. Except for advancing age, he is the same person. Thinking backward he can remember the important pages of his Book even though he may have forgotten some of the words. To other persons, however, his identity must be proven. "Is the John Doe who enlists today in fact the same John Doe who was born eighteen years ago?"

Events of importance worth recording in the Book of Life are frequently put on record in different places since the person moves about the world throughout his lifetime. This makes it difficult to assemble this Book into a single compact volume. Yet, sometimes it is necessary to examine all of an individual's important records simultaneously. No one would read a novel, the pages of which were not assembled. Just so, it is necessary at times to link

the various important records of a person's life.

The two most important pages in the Book of Life are the first one and the last one. Consequently, in the process of record linkage the uniting of the fact-of-death with the fact-of-birth has been given a special name, "death clearance."

IMPORTANCE OF ASSEMBLING THE BOOK OF LIFE

There are many uses for the important records of each person, brought together as a whole. At times, even now, such a collection is of sufficient value that it is made at considerable cost in time and money. Usually, it is the individual who is made to do the work since he alone knows where his records are on file. It is much more difficult for any other person or organization to assemble the records of his life since no personal cross-index exists to lead one to all of a person's records. It is important to many people and organizations to be able to assemble this type of information easily and efficiently.

IMPORTANCE TO THE INDIVIDUAL

Sooner or later most of us need to prove facts about ourselves. The most frequent facts are concerned with birth. Sometimes other facts are needed. Many of these are recorded in the vital records of marriage, divorce, adoption, legitimation, change of name, death and presumption of death. However, it is

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not infrequent that facts are required from records of other types than vital records. Such types of records are those made for social security, military purposes, insurance, payment of pensions, professional licenses, hospital care, and a host of others.

At times it is necessary to prove that one is in truth the person to whom the documents refer.

After death, it becomes especially difficult for relatives to assemble even the most important pages of the Book of Life of their dead. Individuals must furnish proof before title to property is transferred or the payment of legitimate claims is made. Missing persons may be alive or dead.

IMPORTANCE TO REGISTRARS OF VITAL RECORDS

No one has a greater stake in the Book of Life than the registrar.

At the present time, he has the first page of each volume. But, although he may also have other important pages under his custody, they are scattered on different shelves of his vault. Some may be in the offices of his fellow registrars.

The registrar's primary responsibility has always been—

1. To obtain completeness and accuracy of registration.
2. To preserve records.
3. To certify from records.
4. To produce statistics from them.

The possibility of satisfying his basic responsibilities could be greatly reinforced if the registrar would take on the additional responsibility of binding the Books of Life into volumes. It is not necessary for him actually and physically to assemble the records of a particular individual and bind them into a volume. For all practical purposes, the end result will be achieved if he creates a Life Records Index indicating *where* all the most important records of an individual are filed.

The accuracy of vital records would be enhanced because of inconsistencies that would show up. The completeness of vital records would be improved because subsequent documents would show that previous records which should have been filed had not been placed on file. Certification would become more secure from fraud. For instance, birth records of dead people could not be certified for fraudulent purposes. Massive certification jobs for government, which of necessity are so often done without charge, could be handled more efficiently and less expensively through a check-off system. Statistical information would become more meaningful because it would be linked to other types of data.

It is not too rash to predict that if the registrars of the country would undertake to prepare and keep up-to-date the Life Records Index on all the people of the country and do the job systematically and efficiently, they would find themselves and their offices to be the focal point of all records concerning people throughout the country. This would probably be accomplished in a surprisingly few years because the need for such a record linkage service is very great. It should be achieved at a relatively small total cost because the mechanism of the task is a very simple one, and, in performing this service, registrars would find that they were doing a particularly fine job in carrying out their primary responsibilities of registration and statistics.

IMPORTANCE TO HEALTH, WELFARE AND OTHER TYPES OF ORGANIZATIONS

Numerous national, state, and local official organizations rely heavily on knowing certain chapters in the Life Records Index of many persons. In order to carry out their assigned tasks, organizations must ask individuals to produce proof of who they are, where and when they were born, to whom they

are married, whether they served in the military forces, and a hundred other questions. Throughout all of this, the organization official must keep in mind the possibility of fraud. "Is this person really John Doe?" "Is his record as recorded true or false?"

After an individual has died, it is particularly difficult for the organization official to tap the facts concerning the records of the deceased. Frequently he does not know whether or not the individual is dead. For example, certain insurance companies systematically send to all fifty-three registration areas in the United States the names of persons with whom they have lost contact and who are presumed to be dead. The companies want to pay insurance benefits if they are due. In addition, they want to clear their books.

To know the fact-of-death whenever or wherever it occurs is of importance to every organization, official or private, that maintains an "active" file on large numbers of individuals. For example, it is costing the United States Government millions of dollars per year to maintain the millions of records of dead people in their active files. Every search for a particular record is complicated and made more costly because the files contain "dead" records. Space costs are reflected in higher rentals and upkeep.

Another reason organizations have an interest in record linkage is that it will help them obtain more meaningful quantitative knowledge about their own programs. Most organizations dealing with individuals produce some type of administrative statistics of the individuals served by them. It would greatly enhance the significance of such statistics if they could be linked to other facts about the same individuals, such as, "What sort of jobs do they hold?" "How many children do they have?" "What sort of illness do they suffer from?" "What kind of social

environment do they live in?" In particular health and welfare organizations would find that this type of linked statistical analysis would open new vistas of knowledge to them.

BINDING THE BOOKS OF LIFE INTO A SINGLE VOLUME

There are many ways of binding the Books of Life into volumes. Most of the registration systems in Europe accomplish this end by a central national file. Such systems are reinforced by constant referral to this file through the exercise of police powers. In general, all such systems will find disfavor in the United States.

Several years ago Canada was forced, by the passage of legislation on family allowances, to find an economical and efficient way to link all the vital records of an individual. Annual payments of 250 million dollars required up-to-the-minute and certain proof of the ages and birth order of all children under 16 years of age. It was decided that all customary certification methods were too costly, too slow, and too open to fraud. The system as worked out in Canada has proved to be simple and relatively inexpensive. *It has worked from the start.* It has kept vital records in their proper place, i.e., under the control of public health and statistical agencies. In the near future, it will probably be expanded to include older ages.

The elements of the system are:

1. The Dominion Bureau of Statistics obtains microfilm copies of all vital records: births, deaths, marriages, divorces, adoptions, immigrations and emigrations.
2. It then produces a uniform name index punch card for all such records. The index cards so produced are decentralized by duplicating the cards or by sending printed index lists to the province of birth, regardless of what province a particular record is filed in. In this manner a printed, ledger-type Life Records Index is created for each province from the birth certificate. Each punch card

is presented in this Index as a single printed line of type.

3. Massive certification jobs for governmental purposes are done by check-off against this index in the province of birth.

4. A statistical card is punched by the Dominion Bureau of Statistics at the same time as the name index card is punched.

5. The Dominion Bureau of Statistics codes and tabulates all vital statistics, and publishes the national data. Detailed provincial statistics are turned over to the province for their publication and exploitation.

6. The control of this joint federal-provincial vital records-vital statistics system is under a Council of Vital Statistics made up of the provincial registrars, the Dominion Statistician, and the Directors of Vital Statistics and Census, Divisions of the Dominion Bureau of Statistics.

7. The use of a birth card is being actively promoted throughout all Canada so that the person's identity number (birth card number) can be absorbed in all official records and thus simplify the posting of facts to the Life Records Index.

Canada has gone a long way toward producing a solution of this problem for persons under twenty years of age because of the legislation on family allowances. In addition to the great advance which Canada has made in linking the records of families having children under this age, it is now faced by problems involved in creating a nation-wide prompt clearance of the fact of death.

DEATH CLEARANCE

While this is but a single step in the whole process of obtaining record linkage, it is a most important step. There is so much demand for death clearance that, whatever it cost, the earnings should pay the costs of undertaking the task on a nation-wide uniform basis.

The principal market for this national death clearance system comes from those insurance companies and social organizations and institutions, both governmental and private, which either pay out money upon the death of the individual or which have obligations

that are cancelled at the death of the individual. In the aggregate, the market for this type of service is enormous. It is a multiple market, for the fact of death on one individual is needed by various organizations. Ultimately, an average of five to ten purchase orders for such information might be posted against the Life Records Index of each individual for a report of the fact of death whenever the death occurs. Since the deaths of older persons would involve a high percentage of unregistered births, it would probably be economical to handle such records on the basis of a systematic search against state death indexes.

The generalization of a record linkage system to all persons in the country depends primarily on three things:

1. *An efficient Life Records Index to the important records of an individual*—The Life Records Index should be located in the state of birth and must lead to the individual's vital records wherever they might have been placed on file. This cross-index should be arranged in birth certificate number order rather than in an alphabetical name order.

2. *An efficient and prompt inter-state exchange of essential facts* which need to be posted to the Life Records Index—This involves as a minimum the exchange of facts identifying and locating the certificates of marriage, divorce, annulment, adoption, change of name, legitimation and death, whenever they are placed on file in a state other than the state of birth.

3. *The promotion of the widespread use of the Birth Card*—This is the key to efficient record linkage. If the governmental organizations, both federal and state, absorb the birth certificate number into their own records and require that the individual produce it before they obtain services—*Services Which They Need*—people are going to carry their birth cards with them wherever they may go. If the birth certificate number becomes a part of every type of record it will greatly simplify posting to the Life Records Index. The establishment of a nation-wide system of record linkage for all persons in the country will become an invaluable adjunct to the administration of health and welfare organizations and at the same time produce coördinated statistical knowledge of great value. With the birth certificate number as

the binding of the Book of Life and the Birth Card as a device to facilitate the posting to the Life Records Index, all the records on an individual will eventually become linked together. Ultimately, the birth cer-

tificate number should be requested as an item in the national decennial census. In this way the wealth of information produced by the census will be linked to the vital records listed in the Life Records Index.

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