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Thesaurus of Scientific Events

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THESAURUS OF SCIENTIFIC EVENTS *

The historical way of mankind is to a great extent a road of scientific and technical progress. The duty of natural science and technology historians and also of chroniclers of technical progress, is to lessen the so-called "oblivion effect" and to preserve the events and the development dynamics of present-day science and technology in peoples' memory. To solve this task successfully it is necessary to have a regular information exchange between historians and this information should be extremely simple for intepreting by both scientific institutions and individual investigators. Our opinion is that to draw up a "thesaurus of scientific events" and to ensure effective application of the richest historical information, one may successfully use edge punch cards. They are duly universal and simple and need not any complicated equipment, while working with them; their use is accessible to any natural science and technology historian. The Department of the History of Technology and Natural Science of the Ukrainian Academy of Sciences and the Department of Contemporary Scientific and Technical Revolution at the Institute of the History of Natural Science and Technology of the USSR Academy of Sciences worked out a punch card model for the thesaurus of historical events (see Fig. 1) to be used in different countries. It provides the possibility for further detailed differentiation of events within the limits of the investigated branch of science and technology. We based our work on the card model for a prospective character of historical events but the model can accumulate any retrospective material, too.

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The universal character of the punch card conditioned choosing the simplest keys to code characteristics: the direct key and the 1—2—4—7-key; a more complicated superpositional key was only used for marking names.

One marks down (according to the list of descriptor) the branch of science and technology in which the given event took place and the time of its occurence.

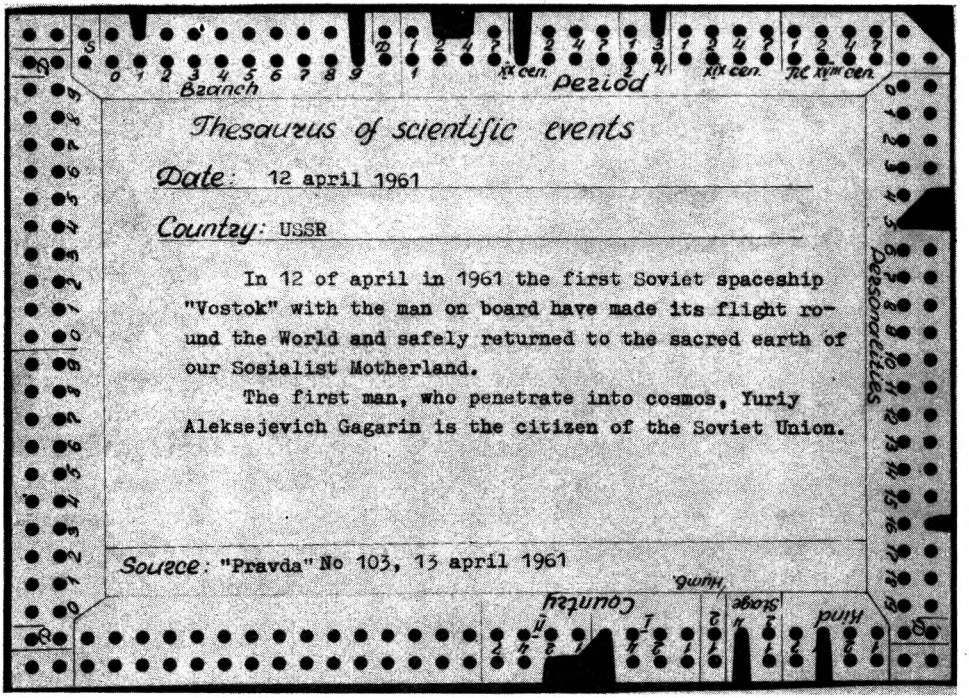

Fig. 1. A sample edge punch card
(the original dimensions are *ca.* 14,5 × 20,5 cm)

The right hand edge of the punch card is intended for authors' names. To mark them one has to find a group of names with the needed name in the list of descriptors and a four—digit number denoting this group is cut on the edge of the punch card. The procedure is as follows: if a number consists of two equal numbers less than 19 (for example: 11—11, 17—17, etc.), make a deep cutting instead of two punched holes marked with this number and then make a schallow cutting instead of "D" (double). If a number consists of two unequal numbers less than 19 (for example: 12—18, 14—10, etc.), make two cuttings instead of the punched pairs marked with these numbers. Deep cuttings are for two-digit numbers going first (12 and 14 in our example) and shallow cuttings are for numbers following them (18 and 10).

If a number consists of two pairs, one of which is a two-digit number (less than 19) and the second one is some other two-digit number, then the first pair is marked with a deep or shallow cutting and the second pair is marked with two cuttings: a deep cutting is for tens and a shallow cutting is for ones. Using the superpositional key one has the possibility of marking 4—5 names on the same edge without being afraid of any information noise.

The stage of an event and the quantity of authors are coded with the direct key, and the 1—2—4—7-key is used for punching events and countries. The rest of 15 pairs of punches are reserved for supplementary data which may be needed in the future.

The left hand edge of the card is intended for an individual object index and it gives the possibility to provide more detailed data about events in the limits of a definite science or technology.

One writes down information about the historical event or fact, the card compiler's name and the source on the unpunched edge of the card. This booking is written in the language of the country in which this card has been compiled. It may be duplicated in the language in which the card index is written which should be done on the reverse side of the card. Our opinion is that it is necessary to compile and exchange punch cards on a world scale. Each country can send its cards to the International Union of History and Philosophy of Science for publicaition in one of the Union's periodicals (in the appendix of the *Archives Internationales d'Histoire des Sciences* for instance). Compiling a card-index is not very labour expensive and it gives the possibility of receiving the necessary information.

Preparing the "thesaurus of scientific events" is the way to have at one's disposal a rather complete catalogue of important events; scientists will be able to make research quite easily in the domain of lows and tendencies of the scientific progress in different fields of human activities.