

## Marx and Engels in the computer age

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Karl Marx was a proverbial collectomaniac. He had his own way and technique of filing texts as well as developing a strategy for shortening and concentrating text. His academic but also his polemic writings are a testament to the abundance of material with which he was able to cope. In 1861 this prompted a decided opponent, the writer Heinrich Beta, to make the perjorative comment that: „Mr. Marx is a master of constructive denunciation...“, asserting that he held onto everything in order to use it whenever opportune. It is this body of work left by Karl Marx and, of course, Friedrich Engels - articles, works and above all manuscripts, excerpts and notes - which the MEGA (Marx-Engels-Gesamtausgabe) has undertaken to edit and publish. It hopes, with the support of modern computer technology, to be able to create a better overview than that which Marx had partially drafted himself.

In the highly specialised field of editing, electronic data processing offers new aids for many comparatively ‘mechanical’ but also time-consuming procedures. At the same time it also offers new presentation and access possibilities. The computer continues to play an important and proven role as a tool, but has now become more significant - even in the academic field - as a medium of information and communication. This has had the result that publications and editors of publications are confronted with the increasingly pressing demand to make access to their texts and the analyses of those texts possible via CD-ROM or the Internet. The MEGA is also seeking to apply this new potential, for access to and analysis of texts, to the extensive Marx/Engels body of work.

### The MEGA as an international and academic project.

Publications and, above all, historical-critical publications tend to be characterised as cultural graveyards, as honourable but antiquated and, in the final

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An issue of MEGA-Studien soon to be published by the Internationale Marx-Engels Foundation will be devoted to the problems and future possibilities regarding the use of EDP at the MEGA. MEGA-Studien appears twice a year as a supplement to the publication. Information regarding the MEGA can be found at: <http://www.bbaw.de/vh/mega/index.html>.  
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analysis, superfluous institutions. A characterisation which in no way applies to the MEGA, however, which is published by an international foundation.

On the contrary, academically speaking, the editing and publication of the extensive works of Marx and Engels still have many surprises to offer.

Karl Marx, who was born in Trier in 1818 and died in London in 1883, has to be among the most important and influential thinkers of the 19th century. Even if his socialist and communist prescriptions are no longer shared, he continues to be valued as a first-rate analyst and critic of capitalist industrialisation. Recently he has even been rediscovered as a pioneer of the concept of globalisation. Thus the sociologist Ulrich Beck was recently able to observe that: Marx had become superfluous because his ideas were being talked about Marx-lessly (i.e. without specific reference to Marx).

Friedrich Engels, who was born in present-day Wuppertal, the son of a factory owner, and died in 1895 in London, had been a close friend of Marx since the 1840s, with whom he co-wrote over 100 texts, including such well-known collaborative works as „The Holy Family or Critique of Critical Criticism“ (1845), „The German Ideology“ (1845/46) and „Manifesto of the Communist Party“ (1848). Engels, who, in contrast to Marx, evolved his social critique based on direct experience of industrialisation, achieved an independent profile, not least as a journalist and military historian. He was central to the spread and, to a certain extent, to the dogmatisation of Marxist thought. If anybody invented Marxism it was Friedrich Engels.

Marx and Engels were not academics in the traditional sense, who tend to pursue their studies far removed from the realities of political life. On the contrary, they repeatedly involved themselves in politics as advocates of revolution, their academic research clearly taking second place to political considerations. Marx, particularly with his main work, *Capital*, wanted to lay the foundations for a proletarian-socialist revolution. Only parts of his extensive body of work were published during his lifetime. Publications of his extensive writings, two thirds of which are currently stored in Amsterdam and one third in Moscow, repeatedly cause a sensation for this reason. I need only mention „Grundrisse der Kritik der politischen Oekonomie“ (Economic Manuscripts of 1857–1858) and „Economic and Philosophic Manuscripts“ of 1844. After 1945 the latter were the starting point for a new reception of Marxism, particularly in western Europe. The MEGA, which was set up in East Berlin and Moscow during the 70s, and which has continued with a new editorial board since 1990, has insights to offer.

Within the ambit of the MEGA a German-French working party is currently working on the reconstruction of *German Ideology*. Editors in Berlin, Moscow and Japan are attempting a reconstruction of Marx's manuscripts and Engels' editorial interventions for the publication of books II and III of *Capital*. It is well-known that Marx wrote these books in manuscript form 1867 - 1870, or rather 1864/65, that is two years before the publication of the first volume.

When Engels published them in 1885 and 1894 he often had to fall back on unfinished manuscripts. We can speculate as to why Marx did not publish his drafts himself. Was he dissatisfied with what he had written? Did he have doubts regarding the draft? What importance did his further studies have? Was he reluctant to publish because neither what he had written nor reworkings had proven viable or sound? The correspondence between Karl Marx and Friedrich Engels which comprised around 20,000 letters, and of which, according to current research, 14,345 remain, has only been partially published. The correspondence up to the year 1867 is currently being worked on by the MEGA. The IV. part (Abteilung), in which excerpts and notes are published, is particularly important for Marx's last 15 years. As he hardly published anything during this period we have to rely on his notes and excerpts, which he produced on a great variety of academic subjects.

The MEGA was started in the 70s in Berlin and Moscow. Despite subscribing to the principles of scientific communism the edition was produced to a high standard according to strict historical-critical principles, so that after 1989 specialists in the field advocated a continuation of the project as a purely academic publication, without any party-political objectives and according to a revised set of publishing principles. Moscow had already started the publication of the complete works in the 1920s, but it was already discontinued after the publication of the 12th volume. Many of the editors at that time fell victim to the Stalin Terror.

Today the edition is issued by an international foundation, based in Amsterdam. Five institutions are part of this International Marx-Engels Foundation (IMES): the International Institute for Social History (IISH) in Amsterdam, the Berlin-Brandenburg Academy for Sciences and Humanities (BBAW), the Karl-Marx-Haus in Trier as part of the Friedrich Ebert Foundation and two Russian Institutes. On top of the academic projects in Berlin and both institutes in Moscow there are further working parties in Trier, Japan and other countries. The IMES does not have any significant funds at its disposal. For this reason the financing of the Moscow groups, in particular, is causing great difficulties.

After 1990 the MEGA did not only undergo an philosophical and organisational change, in which the work of editing was internationalised and made more academic. It also underwent a re-structuring process. The latter was especially difficult because it had to be carried out while the process of editing continued. After computerised type-setting had already been adopted in the GDR and first attempts at a more thorough-going use of computer technology had been made, the changeover to a computerised version of texts and computerised type-setting has now become a reality. Nowadays EDP is an indispensable part of its publication work. The first „new“ MEGA volume came out at the end of 1998, as were further „new“ volumes at the end of 1999 and late 2000. At present a small team with limited financial support are continuing work on an EDP supported publication, including data inputting and rigorous editing of

texts, type-setting through to final publication. However, there are no grounds for self-satisfaction. The MEGA - like other publications - is merely at the beginning of a transformation process. In this article I shall attempt to make a provisional appraisal of the technology involved and point out possible future developments.

## Retrospective

When the publication of the MEGA was being planned in the 60s in Berlin and Moscow one necessity was clear „that substantial preparation was also required for the technical side“. From the beginning electronic data processing was allocated an important role, not least because in the initial stages the completion date was euphorically set as 1985. The type-setting of the first volumes was to begin in 1971. The type-setting of three volumes was planned for 1972, five for 1973 and as many as eight volumes for 1974. From 1975 onwards it was hoped that it would be possible to produce as many as ten volumes per year.

These ambitious goals were held to be „realisable in principle“ if „modern technology (photocomposition, computers, computer programmes) could be deployed more quickly than originally envisaged“. As the MEGA could not be realised by „conventional means“ it was decided to use the „photocomposition process“, rather than the traditional hot-metal composition. The use of EDP over and above its use for type-setting was also discussed and it was hoped to be able to use the data, which was saved on continuous perforated print out paper, „for other work like the creation of indexes or text comparisons“. The original completion dates were soon revised but a period of 25 to 30 years was still allowed for the completion of the project.

In 1972 the required technology, including the computer model „Odra“ was available in Leipzig. Shortly thereafter the production of the MEGA began and there was no lack of praise: the first volumes of the MEGA were described at the Leipzig book fair as the "most beautiful books in the GDR", in Leipzig in 1977 they received the "Golden Letter" on the occasion of the iba (the international book exhibition) and were awarded the Q mark of quality, as the only product of the printing industry in the GDR to be so awarded. The enormous cost in terms of time and energy dedicated solely to the preparation for type-setting thus seemed to have been justified. In the mid 80s further investments became necessary.

The plans to put EDP to further use were not realised. However, when the personal computer era began, these questions again became relevant. After 1986 the use of "micro-chip technology" for the publication of the GDR Marx-Engels edition was centrally planned and initiated, supported by resolutions of the Secretariat of the Central Committee of the Socialist Unity Party (SED). A

commission was appointed and soon began to submit plans and project procedures, train up employees and supervise the first pilot projects. The creation of a computerised version of manuscripts was now put in hand and the groundwork for a database of "specialist explanatory notes" was started. The adoption of the text data which had been recorded by means of EDP setting was attempted. However, this was not seen as a possibility for the near future due to the MEGA's complexity.

With the founding of the International Marx-Engels Foundation (IMES) in October 1990 and the fundamental restructuring of the MEGA the question of up-to-date computer use was raised again. After an initial agreement had been reached, following a conference in Aix-en-Provence, which focused on the revision of editing guidelines, the aim was then to create a "meta-codesystem" for the MEGA, to begin the computer-aided collation and management of the Marx/Engels texts and to prepare a CD-ROM pilot project. For the time being, however, more obvious problems predominated. It was attempted to input edited text, including critical apparatus, into standard text programmes conforming to MEGA specifications, i.e. to adapt the layout of the inputted text to the printed version.

## Current conception and practice

In the meanwhile a different concept is being followed: one which is based on the premiss that data input, academic work with the inputted text data, the preparation for type-setting and type-setting itself must be coordinated. At the end of this procedure one should be left with platform-independent, structured text data, which could easily be put to further use on the Internet, CD-ROM or for the day-to-day work on new volumes. A later reworking of the texts should no longer be necessary.

Today editors generally input a text manually, by means of a simple word processing programme. For this purpose rules and standards have been formulated within the MEGA in the last few years, in order to ensure that edited texts and commentaries are as standardized and structured as possible. The aim is thus to enrich the text with structural information.

Type-setting preparation and the type-setting itself are based on these preliminary marking up steps. The move away from paper-based manuscripts and the transition to this purpose-specific computerisation of texts has meant new and additional tasks for editors, which doubtless present an extra burden. As a result editors have to put together edited texts and commentaries on the computer, as well as carrying out their philological and academic work.

The type-setting preparation for all the MEGA volumes is undertaken by the research project Marx-Engels-Gesamtausgabe at the Berlin-Brandenburg Academy for Sciences and Humanities in Berlin. In this part of the process

technical input errors are corrected, the text data is standardized and further structured through the introduction of clear text coding.

The type-setting is carried out by PAGINA in Tübingen, which transfers the prepared text data into TUSTEP (the Tübingen System for Word-Processing Programmes) and also completes the type-setting in this programme. This decision was made for two reasons: the typography used for the new volumes should be able to compare with the old in every way. Above all, however, the text data should be accessible for any further use after type-setting and printing. There should be no need for time-consuming reworkings of the original Word documents. Both have been successful and it is now possible to base any further processing on the data recorded in TUSTEP and to draw on the structural information contained in this data. The textual data is available in a software-neutral format, which can also be used as a basis for the production of other publications, over and above the printed historical-critical edition, for example printed and CD-ROM versions, as well as Internet presentations. PAGINA has already created a demonstration version of a possible CD-ROM edition for MEGA volume IV/3, which appeared in print in 1998 and contains excerpts and notes by Karl Marx from the 1840s (including the famous „Theses on Feuerbach“).

## Problems and future developments

The technical continuation of the MEGA project can now be guaranteed, given the level of computer application which has now been achieved. But further innovations are necessary. In particular for the production of the critical and explanatory apparatus, increased use of electronic data processing would be necessary. The critical apparatus, with its various component parts, is an essential part of any historical-critical edition and such is also the case with MEGA. Improvements and measures to enhance effective use of technology are particularly desirable in view of the enormous academic and editorial work, which goes into the critical apparatus. So the electronic linking of text and critical apparatus continues to present a problem. Time-consuming and laborious adjustments are necessary once the edited text has been type-set, not least in connection with the volumes which will be completed in the next few years. But no satisfactory solution which could be integrated into the editorial process, has yet been found for the semi-automatic creation of the indexes.

The reconstruction of the genesis of a text, in as much as the documentary evidence allows, is doubtless one of the principle challenges confronting the work of historical-critical editing. Reference need only be made to the problem of the reconstruction of complex manuscripts. This is no different in the case of the MEGA project. The aim of any critical apparatus (including lemmas) is to enable the reader to consult the evolution of the document at any desired point.

The MEGA critical apparatus still caters exclusively for a reader, who, reading the Marx/Engels text line for line, has resort to the apparatus in order to establish differences. The critical apparatus can, however, be rendered more intelligible on the computer, by not only recording the variants in isolation, but also offering them in a textual context. Furthermore, word processing also allows for the possibility of constructing the critical apparatus (i.e. indexes of variants and corrections and also an index of Marx and Engels' insertions, comments and observations) quasi semi-automatically, directly from the edited text. In view of these two possibilities a future departure is being considered from the process which has, up till now, been dictated by the book format.

A priority for MEGA in this area is the more effective use of the computer as a tool for editorial work. Steps towards electronic publication will, however, remain a possibility and should be taken gradually. Thus, volumes appearing in book form should soon be available complete with a CD-ROM, which would contain digital text versions and an extensive search function. The CD-ROMs could be modified and extended from volume to volume and so, in a manner of speaking, develop in tandem. This is particularly important because up till now the collections of documents regarding Marx and Engels available on the Internet have been highly inadequate. These tend to continue with, and, indeed, reinforce the existing canon with regard to selection and presentation from the oeuvre. Historically and critically edited texts by Marx and Engels have not yet appeared on the Internet. Over and above this, there are plans to make annotated indexes of persons, bibliographies, general indexes, indexes of the documented correspondence and samples of Marx and Engels' writings available online. It is also being considered, despite the considerable expense involved in terms of time and money, to digitalise the volumes which have appeared up to 1992.

To summarise, one can, therefore, conclude that a solid basis has been created for the continuation of the MEGA using computer technology. Nevertheless, it is particularly this area in which important deficits and problems remain. A particular difficulty lies in finding simple solutions, which are also realisable in an editorial enterprise as complex and evolved as the MEGA.