LITTLE RED RIDING HOOD 2.0

Text **LILO BERG**

Whether the subject is fairytale research, linguistics or archaeology, ever more humanities scholars are turning to Digital Humanities methods. This produces new knowledge, but also opposition.

"ONCE UPON A TIME there was a sweet little girl. Everyone who saw her liked her, but most of all her grandmother …" These are the opening words of "Rotkäppchen", one of the most popular German fairy tales, most commonly known as "Little Red Riding Hood" in English. The first printed version in German was published 200 years ago. Jacob and Wilhelm Grimm had heard and recorded the story along with many others that only existed as oral narratives at the time. In 1812, the brothers published their famous "Kinder- und Hausmärchen" (Children's and Household Tales or Grimm's Fairy Tales), new editions of which still appear to this day.

But as the Brothers Grimm themselves realised, Germany by no means had a monopoly on fairy tales. There were amazing parallels to be found in folklore narratives from Slavic countries, from Persia, Arabia and India. Motivated by the two philologists, people all over the world in the 19th century started collecting stories. This work produced a treasure trove of more than 2,000 fairy tales, including many that ›

FATHER ROBERTO BUSA
Italian theologian (1913–2011)

The Italian Jesuit Roberto Busa is considered the founding father of Digital Humanities. He was one of the first to recognise that computers could do more than just process numbers. In the late 1940s, he embarked on the monumental task of cataloguing all eleven million words in the works of the Doctor of the Church, Thomas Aquinas. Busa turned for help to Thomas J. Watson, the founder of IBM. That help was forthcoming and led to the publication of the 56-volume "Index Thomisticus" in 1980. The Alliance of Digital Humanities Organizations (ADHO) awards the Roberto Busa Prize in memory of their pioneering forefather. **WWW.CORPUSTHOMISTICUM.ORG**

Roberto Busa at Yale University in 1956

THE VERBAND DIGITAL HUMANITIES IM DEUTSCHSPRACHIGEN RAUM HAS MORE THAN

160

MEMBERS. IT IS THE LARGEST DH ASSOCIATION IN EUROPE.

Now available online: richly-decorated manuscripts from the 11th to the 15th centuries

PROFESSOR DR CLAUDINE MOULIN
Trier University

The 500 or so mediaeval manuscripts from the Benedictine Abbey of St. Matthias in Trier were scattered around many different locations. In the virtual scriptorium at Trier Center for Digital Humanities they are now gathered together and can be accessed by researchers at any time and in any place. Founded In 1998, Germany's oldest centre of excellence in the Digital Humanities lies in the deep west of the Republic. This was where "The Digital Grimm" was produced, a digital edition of the famous "Deutsches Wörterbuch" (German Dictionary), interlinked with other dictionaries. Since 2003, the centre in Trier has been headed by Luxembourg-born Professor of German and Humboldt Host, Claudine Moulin, who is convinced that "Digital Humanities are the future of the humanities." **KOMPETENZZENTRUM.UNI-TRIER.DE**

PROFESSOR DR GERHARD LAUER
Georg-August-Universität Göttingen

Fairy tales are just one of Gerhard Lauer's many research themes. But whether the literature scholar is working on Franz Kafka or investigating the effect exciting books have on the brain, he always employs DH methods as well. As the founding director of the Göttingen Centre for Digital Humanities he and other institutions in the region have created the requisite infrastructure. For a number of years, young researchers from all over the world have homed in on Göttingen for the Digital Humanities Summer School, which takes place in August. What is it that attracts these junior researchers? "It's a new departure, the long-overdue modernisation of the humanities," says the Professor of German, who took part in the Humboldt Foundation's TransCoop Programme from 2006 to 2009.

GERHARDLAUER.DE   **WWW.GCDH.DE/EN**

The movement began in the late 1940s when Father Roberto Busa embarked on a major project to produce a 56-volume edition of the works of Thomas Aquinas – with the help of computers. The Italian priest managed to achieve his goal faster than conventional means would have allowed. Germany's first forays into computer-assisted research were made a few years later by a group headed by Wilhelm Ott at the University of Tübingen. However, the real impetus came in the 1990s with the World Wide Web, e-mail and high-performance computers, facilitated by ever simpler and cheaper internet access.

In the humanities it was the linguists and archaeologists who were the first to recognise the advantages of the new tools. In their disciplines, the digital conservation of texts and objects, and data-analysis are firmly established methods. But Arabic scholars, law scholars, art historians, sociologists, theologians and business information systems scientists, in fact, practically every kind of humanities scholar and social scientist is now getting a taste for it. They are experimenting with e-humanities methods, and some even refer to themselves as Digital Humanists.

Largely unnoticed by the public, a huge digital workshop has come into existence in Germany where people scan, measure, save, plan and calculate for all they are worth. In Hamburg, literature scholar Jan Christoph Meister uses his own algorithms to trawl through a large collection of selected stories from the 19th century: He wants to know when the inner life started to play a role in literature. In Trier, mediaeval scholar Claudine Moulin scrutinises her digital treasure trove: It contains 500 of the most beautiful mediaeval manuscripts and is freely available to anyone, 24/7. In Berlin, archaeologist Reinhard Förtsch is in the process of digitally conserving threatened Syrian cultural heritage goods so that they can be restored more easily. In Leipzig, classicist Gregory Crane is considering how he can get more people interested in classical texts and his virtual translation lab. And in Würzburg, Germanist Fotis Jannidis uses computers to record the frequency of ❯

are similar to "Little Red Riding Hood". Later researchers sorted the wealth of different versions into two main groups: a predominantly European type and a second type that differed from the European in that it did not focus on one girl but on several children. However, sceptical colleagues soon started questioning whether this division was really sound. Had the various types developed independently? Or did they all originate in an original archetype tale?

"It's the old issue of the family tree," says Göttingen-based Germanist Gerhard Lauer who has done a lot of work on fairy tales. The Brothers Grimm posed the same question themselves, but lacked the over-

view and appropriate methods to find a satisfactory answer. One method that has generated a particularly original answer was found just recently – of which more anon. It is the product of a new research direction known as Digital Humanities or DH.
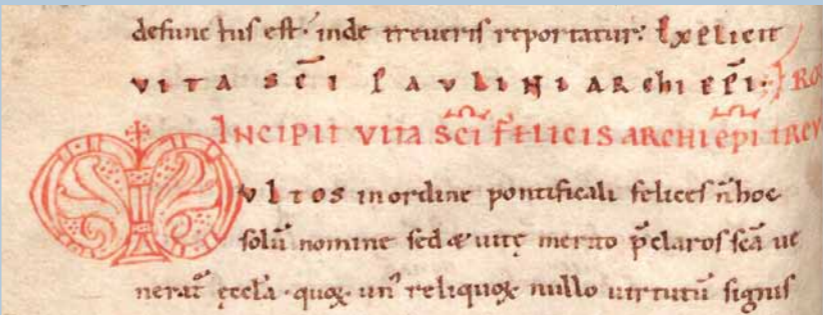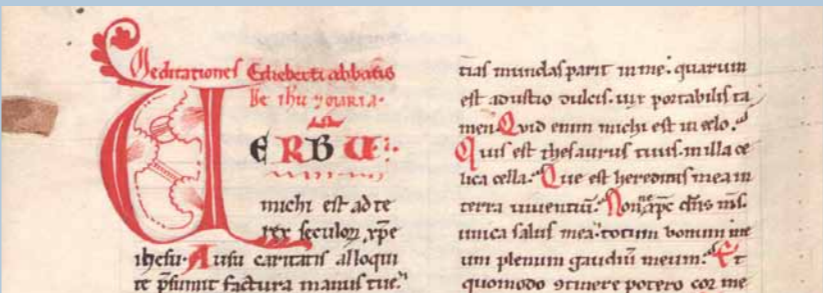
This discipline is gradually establishing itself in Germany, and Gerhard Lauer is one of its proponents. He used to conduct humanities research in the classic fashion with a pen and card indexes, but he now almost exclusively uses the computer-assisted tools and methods of the Digital Humanities. "It is now hardly any problem to analyse large amounts of data," says the Göttingen literature scholar.

Photo: private

PROFESSOR DR GERHARD WOLF
Bayreuth University

The increasing digitalisation of the humanities could have a harmful effect on students. This is the concern of Bayreuth Professor of German Gerhard Wolf. Many young people, he notes, are excellently equipped to use new media but are barely able to close read a text. "Lots of students ask me why they should bother to remember things when they can look them all up on the internet anyway," Wolf reports. In 2012, he hit the headlines nationwide with a survey on students' aptitude to study humanities subjects. The results of the survey of professors at 134 faculties of philology were indeed alarming: Freshers had huge deficits in orthography, punctuation and grammar; their vocabulary was restricted and their reading comprehension poor. This negative trend is unbroken, Gerhard Wolf notes two years on, and Digital Humanities are actually encouraging it. **WWW.AEDPH. UNI-BAYREUTH.DE**

IN GERMANY, THERE ARE

15

CHAIRS IN DIGITAL HUMANITIES.

GOD AND THE WORLD
How often is God the subject of German- and English-language literature? A simple comparative search with the Google Ngram-Viewer programme reveals interesting features from the last two hundred years. It also shows what percentage proportion of the entire number of words in the text selection is constituted by the search term.

140

MILLION BOOKS HAVE BEEN PUBLISHED TO DATE.

Photo: Jessica Scranton

DR EREZ LIEBERMAN AIDEN & DR JEAN-BAPTISTE MICHEL
Baylor College of Medicine, Harvard University, Google

To unearth the deeper meaning from mountains of data – this is what American Erez Aiden (left) and French researcher Jean-Baptiste Michel (right) are after, irrespective of whether the data hails from the humanities, biology or astronomy. But in contrast to natural sciences, data mining is not often used on a large scale in the cultural sector. And it is even more unusual for a humanities study to make the cover of „Science". Three years ago, Aiden and Michel managed both. With their evaluation of millions of books they established „Culturomics", a method of tracing cultural and social trends. There have been no further publications of the same calibre as the one published in „Science", but that may be due to the fact that Aiden has since become the director of the Center for Genome Architecture at the Baylor College of Medicine in Houston, Texas, USA. He wants to discover how the genomes of humans and other organisms are folded inside the nucleus of a functioning cell. His colleague, Michel, who describes himself as an entrepreneur, artist and researcher, commutes between Harvard and Google. **WWW.CULTUROMICS.ORG**
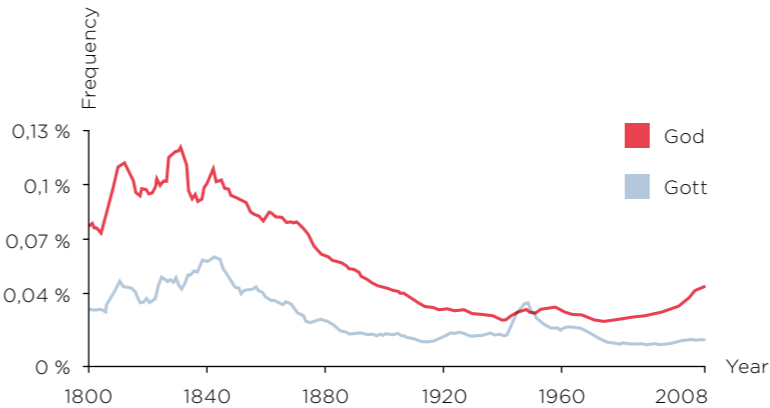
"we", "you", "they" and other everyday words in novels. As amazing as it may sound, information of this kind is sufficient to tell one novel from another and to ascribe unknown works to their authors.

"Germany plays an important role in the global DH scene," says John Nerbonne. Until recently, the computer linguist and Humboldt Award Research Winner was President of the European Association for Digital Humanities and is one of the movement's pioneers. In his research at the University of Groningen, The Netherlands, he investigates how linguistic habits spread, and the current fate of European dialects. That they are declining comes as no surprise, but the speed with which this is happening is frightening: Nerbonne's team has been able to show that in Sweden there has been a massive drop in the diversity of dialects in just over one single generation. The linguist greatly values the new opportunities to collaborate across disciplines and around the world and, of course, he uses methods deriving from mathematics and IT. In this way, he and his comparatively small team are able to evaluate enormous amounts of data in a short time. Actually, says John Nerbonne, working on a large scale is one of the main advantages of the Digital Humanities.

Data mining and big data are the key terms here – digging for word gold in the mountains of data. Two of the champions in this discipline are Erez Aiden and Jean-Baptiste Michel. The two young researchers set up what they called – with an admirable disregard for modesty – Cultural Observatory, a centre at Harvard University for the observation of human culture. Aiden is a physicist, Michel an engineer, and both are also at home in the life sciences. In an analogy to genomics, the study of all the genes in a living organism, they call their research method for cultural studies "Culturomics". "Just as genomics takes a magnifying glass to biology, "Culturomics" uses data analysis to study culture," said Erez Aiden at a TED conference that is available online.

Aiden and Michel have a privileged partnership with Google to thank for their fame. From an early stage they had access to the store of knowledge the internet giant had acquired through its Google Books project. The American company's ambitious plan is to digitalise basically all the books ever printed. That is an estimated 140 million books, according to experts like Gerhard Lauer; so far, Google has managed about 25 million. The two researchers Aiden and Michel only used some of them for their spectacular publication in "Science" in 2011: about five million books with 500 billion words from the last five centuries.

In order to conduct research in this gigantic library, they developed a programme called Google Ngram Viewer. N-grams are words or phrases defined by the user. The programme determines how frequently they occur in the text files according to language and quickly and graphically presents it in the form of a diagram. The programme is accessible online free of charge, is simple to use, and the results are often astounding. Who has been quoted most frequently in German books in the last 50 years: Albert Einstein, Sigmund Freud or Karl Marx? Which artists did the Nazis censor most strictly? Do we discuss God less often than we used to? Which term is used more frequently: "making love" or "having sex"? How old are actors or politicians when they become famous?

With the Google Ngram Viewer amateur researchers can make extraordinary discoveries, but professionals use the tool, too. Fotis Jannidis, for example, holder of the chair in German Literature and Literary Computing at the University of Würzburg, regularly uses it for preliminary research. "Ngram Viewer is an admirable tool, despite its methodological shortcomings," says Jannidis. But there are now clever tools for scientific text analysis in Germany as well, like the vir-

tual research environment for humanities scholars and social scientists from Trier or the TextGrid from Göttingen. "In future, there will be more programmes of this kind," Jannidis believes.

Are all these the precursors of the data revolution predicted by Erez Aiden and Jean-Baptiste Michel? "Its consequences will transform how we look at ourselves. Big data is going to change the humanities, transform the social sciences, and renegotiate the relationship between the world of commerce and the ivory tower," they claim in "Uncharted: Big Data as a Lens on Human Culture", the book they published in 2013. This hyper-exuberant prophecy is reminiscent of the marketing slogans used by Apple, Google and Co. But does it perhaps contain a quantum of truth? Is not the digitalisation of cultural studies inevitable in an increasingly technological world? And what will happen when mathematicians and technicians rush in where previously only intuition and interpretation, genius and poetry dared to tread?

"Digital projects swallow up resources that we urgently need for our core business," says Gerhard Wolf, Professor of Early German Philology at Bayreuth University. What Wolf understands as the core business of the humanities is the interpretative analysis and editing ›

Just a few years ago you still had to search for DH courses with a magnifying glass. Today there is a respectable number of them across the country. And the trend is upward.

Photo: Humboldt-Stiftung / Sven Müller

PROFESSOR DR GREGORY CRANE
Leipzig University

His career demonstrates his dedication: For 30 years, Gregory Crane has been working on an open-access online library with the aim of collating the cultural heritage of humankind. The mega-project initiated by Crane and his team is known as the Perseus Digital Library after the hero of Greek mythology, a son of Zeus. So far, the library has focussed on ancient Greek and Roman sources but is increasingly admitting material from other epochs. Most of the works are translated whilst the original texts can also be viewed. The Perseus Project is located at Tufts University in Boston, Massachusetts, USA, where 56-year-old Crane taught and worked for many years. In 2012, he moved to Leipzig thanks to an Alexander von Humboldt Professorship. The university there nominated him with the aim of transforming its Department of Computer Science into a Digital Humanities Centre of world renown.

WWW.DH.UNI-LEIPZIG.DE
WWW.PERSEUS.TUFTS.EDU

Screenshots: www.humboldt-foundation.de

Classical authors are the focus of the Perseus Project.

of texts, learning through research in the sense of Humboldt's idea of the university. But it is becoming increasingly difficult to spark the enthusiasm of the major funding organisations for this classical interpretation, according to Wolf. "Many decision-makers are natural scientists and they are fascinated by the quantitative, digital methods."

The things the Germanist and long-serving chairman of the Philosophischer Fakultätentag (association of humanities and social sciences at German universities) openly decries are only otherwise whispered by less brave colleagues behind closed doors. Researchers are apparently too scared of spoiling their chances with the funders. But the criticism is real and it points in a number of directions: Ever more jobs are being given to technicians and computer scientists instead of subject specialists; it is not unusual for investments to be made in programmes that prove unless; there is no guarantee for the longevity of the digitalised material and, in general, dependence on technology is assuming worrying dimensions.

"We are in danger of drowning in all the accumulated data," says Martin Hose from LMU in Munich. Whilst the Greek scholar welcomes the digital conservation of cultural heritage, is involved in edition projects of this kind and willingly admits that his research and teaching benefit from the use of digital primary data, the Bavarian researcher also warns that we are in danger of losing the general overview that
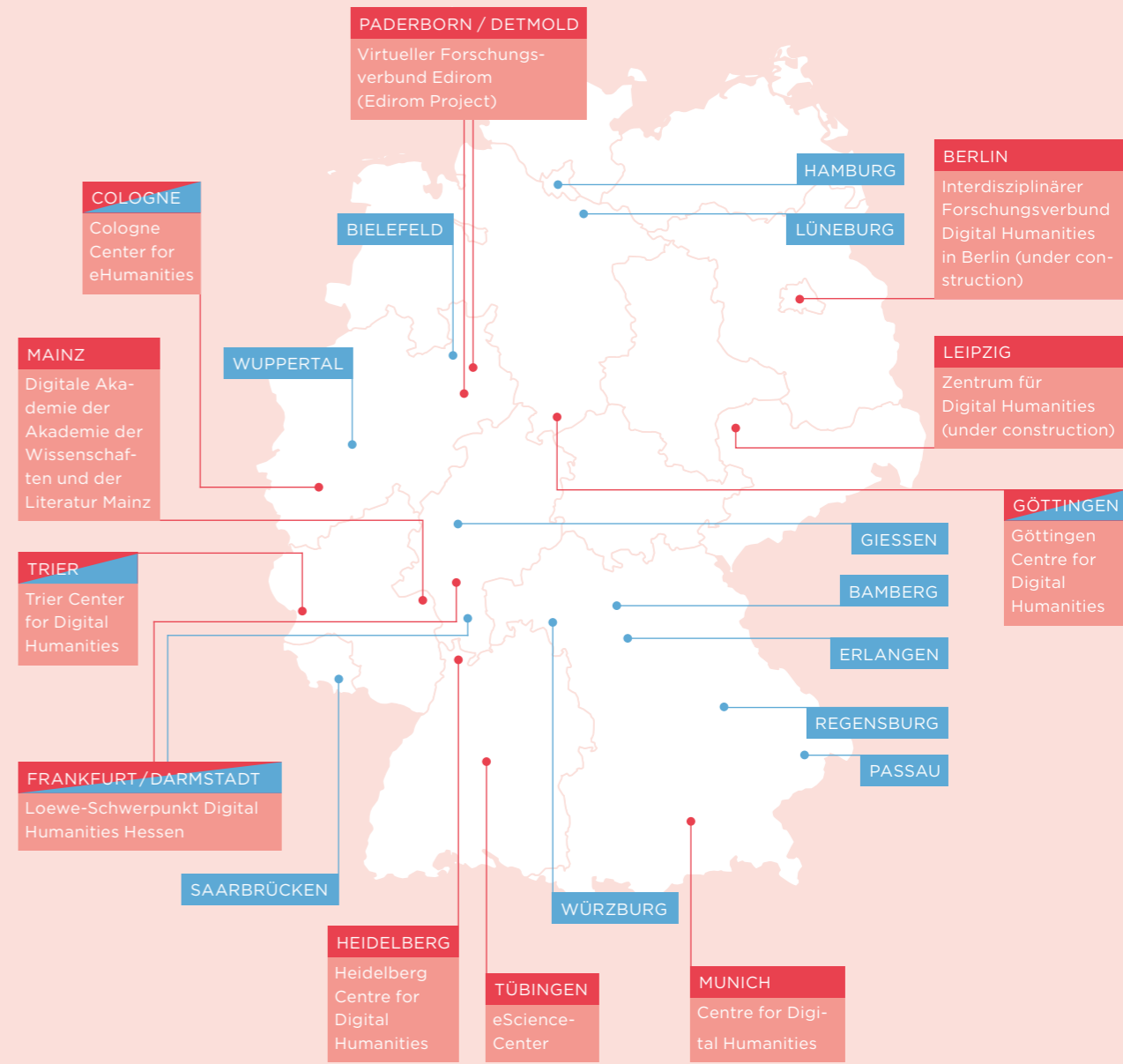
18 %

OF ALL THE BOOKS EVER PUBLISHED
HAVE BEEN DIGITALISED.

enables us to differentiate between what is important and what is less important. A grasp of things in their entirety often emerges when ploughing through the books, but almost never when googling key words, according to Martin Hose. "But without the intellectual infrastructure we don't know what we should be searching for," he continues. So the best answers to our questions could remain hidden from us.

The kind of answers to be found in Socrates, Euripides and Seneca, for example. Their works and those of many other classical authors have been collected by the American researcher Gregory Crane in an enormous online library, the Perseus Digital Library. It includes a portfolio of tools for translating ancient texts into modern languages ›

PADERBORN / DETMOLD
Virtueller Forschungs-verbund Edirom (Edirom Project)

COLOGNE
Cologne Center for eHumanities

HAMBURG

BIELEFELD

LÜNEBURG

BERLIN
Interdisziplinärer Forschungsverbund Digital Humanities in Berlin (under construction)

MAINZ
Digitale Akademie der Wissenschaften und der Literatur Mainz

WUPPERTAL

LEIPZIG
Zentrum für Digital Humanities (under construction)

TRIER
Trier Center for Digital Humanities

GIESSEN

BAMBERG

GÖTTINGEN
Göttingen Centre for Digital Humanities

ERLANGEN

REGENSBURG

PASSAU

FRANKFURT / DARMSTADT
Loewe-Schwerpunkt Digital Humanities Hessen

SAARBRÜCKEN

WÜRZBURG

HEIDELBERG
Heidelberg Centre for Digital Humanities

TÜBINGEN
eScience-Center

MUNICH
Centre for Digital Humanities

STUDYING DIGITAL HUMANITIES

Ever more universities are offering courses in Digital Humanities. In Germany alone there are currently 15 Bachelor's and Master's courses; worldwide there are about 80. Various different specialisations are available ranging from Digital Media Computing via Computer Linguistics to Digital History and Educational Technology. DH is usually taught in combination with a traditional humanities subject. Students learn how to operationalise research questions in the humanities so that they can be addressed by technical means. They discover how to use and, if necessary, develop analytical tools. The curriculum also covers how to prepare and visualise research outcomes convincingly. Graduates of these degree courses are in demand. Employment opportunities exist at universities and schools, in libraries, archives and museums as well as with publishing houses, software firms and in the information management sector.

WWW.DIG-HUM.DE

PROFESSOR DR JAN CHRISTOPH MEISTER
Universität Hamburg

If you ask Hamburg literature scholar Jan Christoph Meister about his vision for the Digital Humanities, you do not have to wait long for an answer: "Several project clusters running for ten years and involving colleagues from the humanities, computer science and cognitive research – that would be a breakthrough." Meister estimates this would cost about 20 million EUR. He criticises the hesitancy in providing funding for concrete research questions by contrast with infrastructure measures and would like to see more support forthcoming from science organisations and foundations. From 2010 to 2013, Meister was a partner in a project sponsored under the Humboldt Foundation's TransCoop Programme.

JCMEISTER.DE

ASSOCIATIONS

DHD, Digital Humanities im deutschsprachigen Raum: Founded in 2012, the association now has more than 160 members. It sees its role as representing the interests of everyone active in Digital Humanities, and organises annual conferences.

WWW.DIG-HUM.DE

EADH, European Association for Digital Humanities: The European association sees itself as a platform for all disciplines involved in Digital Humanities. Established in 1973, it promotes the emergence of new initiatives.

EADH.ORG

ADHO, Alliance of Digital Humanities Organizations: National associations from Europe, North America, Asia and Australia have joined this umbrella organisation. ADHO runs annual conferences, awards prizes and publishes several journals.

ADHO.ORG

and for investigating the evolution and dissemination of classical ideas across the centuries. Crane is also a pioneer of the Digital Humanities and his Perseus Project, which was launched in 1985, is one of the movement's flagships. "I am a citizen of the world," says the 56-year-old American who has held an Alexander von Humboldt Professorship at

10 %

OF GERMAN HUMANITIES SCHOLARS
ARE ACTIVE DIGITAL HUMANISTS.

the University of Leipzig for the last year. Valued at five million EUR, the professorship provides the spry classicist with a level of funding almost undreamt of in the humanities.
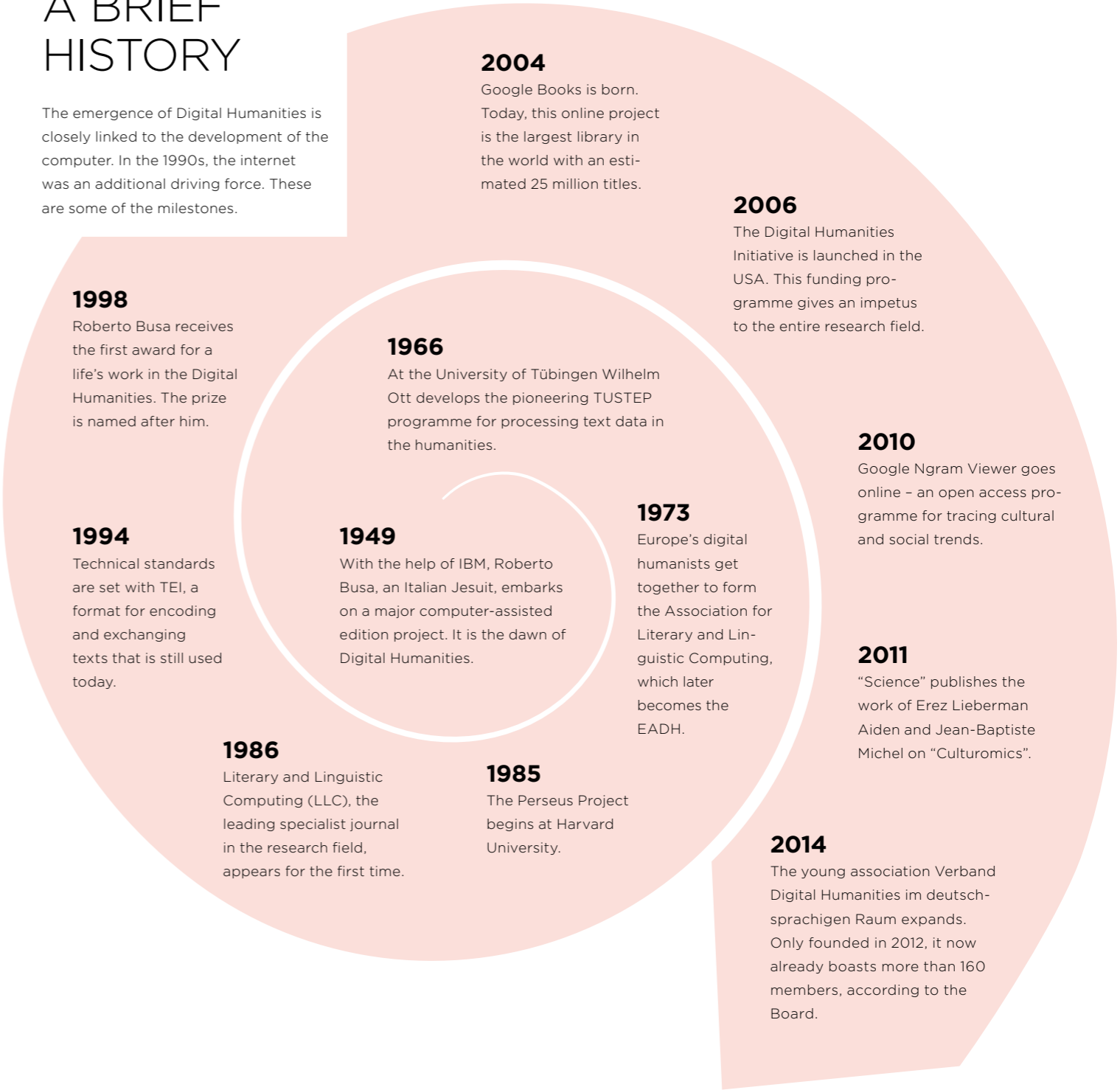
Crane wants to use the money to drive a major European project: an internet platform for students at secondary schools and universities as well as for other people to translate and analyse classical texts, and correct and inspire one another in the process – accumulating swarm intelligence to strengthen common roots. The American researcher illustrates the dimensions of the project: "There are 800,000 Latin learners in Germany, 500,000 in France, two million in Italy and hundreds of thousands in other European countries. If only ten per cent of them were to take part, we'd have got a long way."

Gregory Crane and the Humboldt Professorship have been a huge impetus for digital ideas in Germany, according to Jan Christoph Meister, literature scholar at the University of Hamburg. Meister is first chairman of the Verband Digital Humanities im deutschsprachigen Raum, a German-language DH association founded two years ago. Its first annual conference in March attracted more than 350 participants; that is almost the same number clocked up by an average conference of German scholars. The keynote lecture was held by John Nerbonne, provocatively entitled, "Die Informatik als Geisteswissenschaft" (Computer science as a humanities discipline).

In the opinion of Jan Christoph Meister, a new culture is emerging in the humanities: The outstanding, individual researcher is increasingly being joined by interdisciplinary teams in which it is not necessarily the professor who has the say, but sometimes a doctoral candidate with a brilliant idea. "A good deal of the scepticism we encounter is explained by people fearing a loss of reputation," says the Hamburg German scholar. He estimates that ten per cent of humanities scholars in Germany are currently active in the new movement and that about five per cent expressly oppose it. "More than 80 per cent are vaguely interested and are waiting to see what happens."
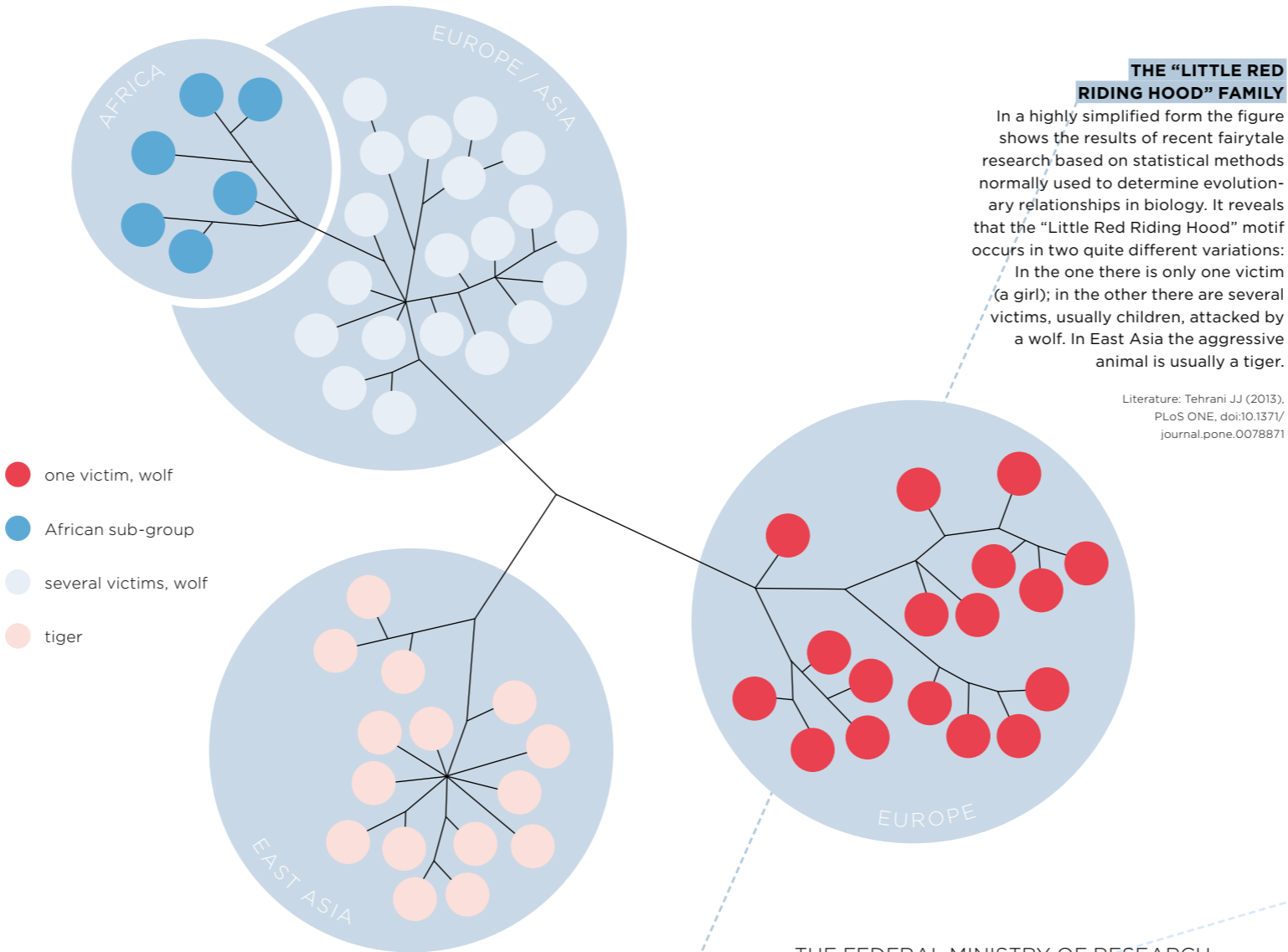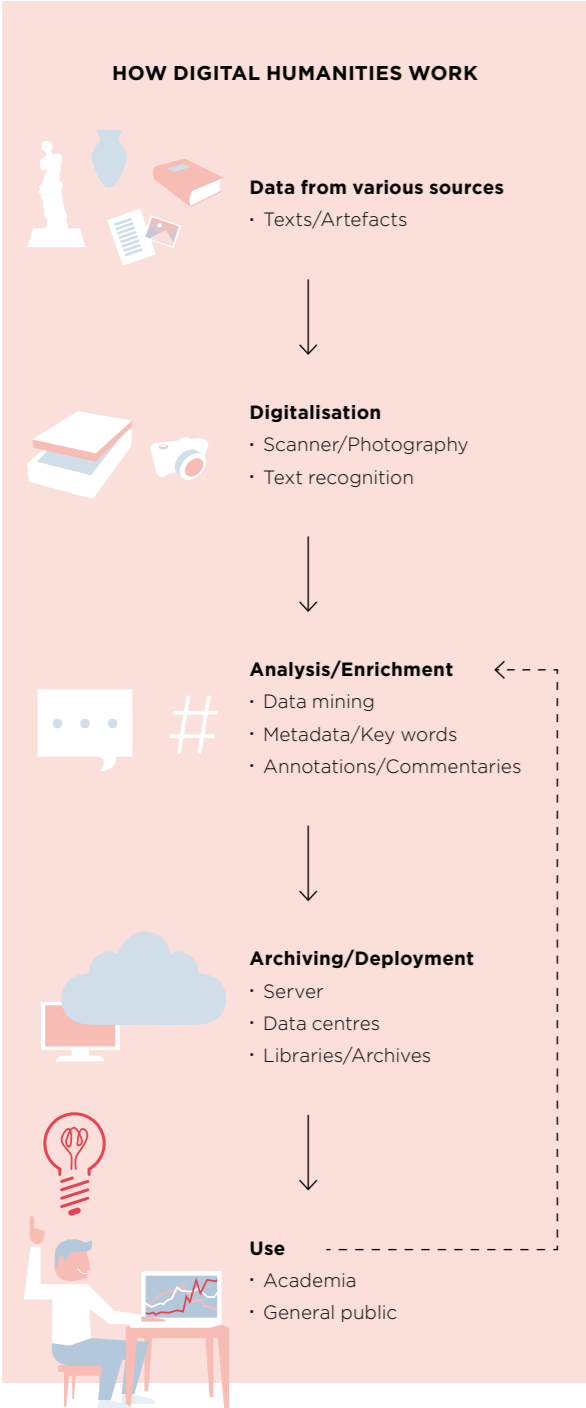
A BRIEF HISTORY

The emergence of Digital Humanities is closely linked to the development of the computer. In the 1990s, the internet was an additional driving force. These are some of the milestones.

2004
Google Books is born. Today, this online project is the largest library in the world with an estimated 25 million titles.

2006
The Digital Humanities Initiative is launched in the USA. This funding programme gives an impetus to the entire research field.

1998
Roberto Busa receives the first award for a life's work in the Digital Humanities. The prize is named after him.

1966
At the University of Tübingen Wilhelm Ott develops the pioneering TUSTEP programme for processing text data in the humanities.

2010
Google Ngram Viewer goes online – an open access programme for tracing cultural and social trends.

1994
Technical standards are set with TEI, a format for encoding and exchanging texts that is still used today.

1949
With the help of IBM, Roberto Busa, an Italian Jesuit, embarks on a major computer-assisted edition project. It is the dawn of Digital Humanities.

1973
Europe's digital humanists get together to form the Association for Literary and Linguistic Computing, which later becomes the EADH.

2011
"Science" publishes the work of Erez Lieberman Aiden and Jean-Baptiste Michel on "Culturomics".

1986
Literary and Linguistic Computing (LLC), the leading specialist journal in the research field, appears for the first time.

1985
The Perseus Project begins at Harvard University.

2014
The young association Verband Digital Humanities im deutschsprachigen Raum expands. Only founded in 2012, it now already boasts more than 160 members, according to the Board.

Meanwhile, the trend is unmistakable: The number of digital humanists is growing and the funding is flowing more freely. Whilst the sceptics are still insisting that it is not a new subject but, at best, an ancillary science, the digital idea is taking root. There are already 15 DH chairs at German universities, and further centres and courses are springing up. The Federal Ministry of Research is investing some 19.5 million EUR in such projects up to 2017, and the Deutsche Forschungsgemeinschaft has announced a bilateral programme to expand infrastructure and develop services in cooperation with the American National Endowment for the Humanities.

"Germany is strategically important for the Digital Humanities," says Gregory Crane, because no other country promotes the humanities to the same extent. It has certainly been worth his while and his host may very well benefit as well: By the end of the decade, Crane wants to implement a business model that could rejuvenate the old publishing city of Leipzig. On the pattern of the Saxon science publisher Benedictus Gotthelf Teubner (1784–1856), the American is preparing a programme of teaching aids for classical languages. Not on paper, as in the past, but in a contemporary digital format with computer games, e-books and online examination preparation.

›

1,320

EXEMPLARY WORKS OF GERMAN LITERATURE ARE AVAILABLE TO DOWNLOAD FROM THE GERMAN TEXT ARCHIVE.

HOW DIGITAL HUMANITIES WORK

Data from various sources
· Texts/Artefacts

Digitalisation
· Scanner/Photography
· Text recognition

Analysis/Enrichment
· Data mining
· Metadata/Key words
· Annotations/Commentaries

Archiving/Deployment
· Server
· Data centres
· Libraries/Archives

Use
· Academia
· General public

AFRICA

EUROPE / ASIA

EAST ASIA

EUROPE

● one victim, wolf

● African sub-group

○ several victims, wolf

○ tiger

THE "LITTLE RED RIDING HOOD" FAMILY
In a highly simplified form the figure shows the results of recent fairytale research based on statistical methods normally used to determine evolutionary relationships in biology. It reveals that the "Little Red Riding Hood" motif occurs in two quite different variations: In the one there is only one victim (a girl); in the other there are several victims, usually children, attacked by a wolf. In East Asia the aggressive animal is usually a tiger.

Literature: Tehrani JJ (2013), PLoS ONE, doi:10.1371/journal.pone.0078871

"The Digital Humanities are more than just a craze," says critic Gerhard Wolf. It remained to be seen, however, what added value they would actually create. As far as John Nerbonne is concerned, the answer is perfectly clear: "With very few exceptions, all disciplines can benefit from the new methods." Würzburg Germanist Fotis Jannidis is even more vehement: "A time will come when all the humanities subjects use digital resources and methods."

Will we know more about "Little Red Riding Hood" by that time? The Brothers Grimm suspected that the fairy tale originated in India and spread from there to the rest of the world. In reality, it did not actually happen like that at all, as a recently published British study has disclosed. "It's the jewel in the crown of Digital Humanities," claims Göttingen fairytale researcher Gerhard Lauer, "a truly game-changing investigation." In his study, anthropologist Jamshid Tehrani applies phylogenetic network-based methods to fairytale research, examining 58 variations on the "Little Red Riding Hood" theme from Europe, Africa and Asia. The study comes to the conclusion that most European variants belong to one certain type and most African variants to another whilst the East Asian tales tend to be a mixture of both. Thus

THE FEDERAL MINISTRY OF RESEARCH IS PROVIDING FUNDING OF

19.5

MILLION EUR FOR E-HUMANITIES BETWEEN 2013 AND 2017.

instead of one origin, there seem to be several – not exactly the epitome of a pedigree. So is there really any point in still holding on to the old concept of origins?

As a matter of fact, the discoveries in the root system of fairy tales have a lot in common with insights into modern evolutionary biology. Here, the idea of a direct line family tree was abandoned long ago. There has been multiple branching from time immemorial, which has now prompted palaeoanthropologists to coin the term "phylogenetic bush". Cultural development seems to have followed equally complex paths. And yet, people still keep finding similar answers to ancient questions – in the tale of "Little Red Riding Hood", for instance.

PROJECTS

In Europe a digital infrastructure for cultural studies is being developed with the aim of facilitating sustainable access to cultural goods and research data. These are the two major programmes:

DARIAH, Digital Research Infrastructure for the Arts and Humanities, a consortium of 15 countries, offers digital methods and tools for humanities scholars. 20 universities, data centres and libraries are involved in the German subproject, DARIAH-DE, which has been granted funding of nearly 11 million EUR up to 2016 by the Federal Ministry of Research.

WWW.DARIAH.EU

CLARIN, Common Language Resources and Technology Infrastructure, concentrates on language resources for research in the humanities and social sciences. CLARIN is also just entering the second funding phase up to 2016. The German project consortium, CLARIN-D, is funded by the Federal Ministry of Research and coordinated by the University of Tübingen. **WWW.CLARIN.EU**

Photo: Elmer Spaargaren
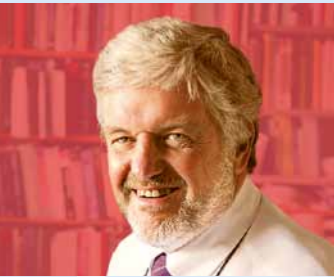
PROFESSOR DR JOHN NERBONNE
University of Groningen, The Netherlands

Digital methods have something to offer nearly all subjects, says computer linguist and Humboldt Research Award Winner John Nerbonne. There are a few exceptions, in his opinion, such as sub-areas of image analysis due to the enormity of technical problems. In law, on the other hand, there will be a veritable Digital Humanities boom, the language researcher with Irish-American roots predicts. He has been working on computer-assisted methods for years and knows their potential and limits like no other. „Humanities scholars don't need to be afraid of being overrun by technology," says Nerbonne. „They know the relevant research questions and only they give meaning to Digital Humanities."
WWW.LET.RUG.NL/NERBONNE   WWW.GABMAP.NL