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文化研究读解系列

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# 读解新媒体 Reading New Media

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## 总 序

文化研究在西方学术界从 20 世纪 60 年代诞生之日起就经常被正统学者批评 为华而不实的"学术时髦"。这种批评不仅没有阻止学术界对文化研究与日俱增的 兴趣,反而使之成为在西方高校备受关注的显学。究其原因,文化研究的确填补了 传统人文学术研究领域的空白,发挥着不可替代的知识创新功能。

文化研究旨在检验文化实践与权力的关系,其研究对象遍及日常生活中社会与政治背景下无限多样的大众文化形式,不仅关注文化如何建构我们,而且关注我们如何建构文化。文化研究试图解释构成人类生活环境的各类文本与意识形态、阶级、种族、性别等的复杂关系,其研究方法具有典型的跨学科性,涉及社会学、政治学、历史学、哲学、传播学、文学批评、女性主义批评、艺术批评、翻译研究,等等。上述意义上的文化研究的确超越了一切传统的人文与社会科学研究范式,提供了观察人类文化和现实生活的独特视角。

西方文化研究的理论与范式正式进入中国大陆学术界大概可以追溯到本世纪初。在短短十多年的时间里,西方文化研究的概念和理论被大量输入国内学术话语体系,不少域外文化研究的著作被翻译出版,文化研究机构不断涌现,相关课程开始进入高校课程设置,越来越多的硕士和博士论文瞄准文化研究选题。文化研究显然已成为中国学术界的显学。

国内学术界文化研究的进一步展开,必须更加系统、深入地把握西方文化研究的理论与方法,同时,高校文化研究相关课程的教学必须建立在对文化研究核心经典文本的阅读之上。为此双重目的,我们组织了一支中西方学者合作团队,联袂推出"文化研究读解系列"。本套丛书包括《读解文化研究》、《读解电视》、《读解流行音乐》、《读解新媒体》和《读解电影》等。每分册的选文由相关领域造诣深厚的西方学者负责精心挑选,均为文化研究领域公认的经典文本;每分册的导读和注释等则由中国学者完成,旨在帮助中国读者准确理解原文。

如此分专题系统呈现和读解西方文化研究领域的经典文本,在中国学术界尚属首次。我相信,无论是文化研究领域的研究者还是授课教师,都能从这套权威性的读本中获取丰富的研究灵感和教学资源。

当然,这套丛书还存在这样和那样的不足,特别是现有的选题远未完整呈现半个多世纪以来西方文化研究的丰硕成果。这一遗憾只有留待来日弥补了。

北京外国语大学英语学院院长

### 前 言

首先,我要感谢丛书主持人孙有中教授的信任,因为选编这本论文集,我得以对新媒体(New Media)的种种知识生产有了更为全面的观照,得以对新媒体研究中的各种学理性的阐述有了更为深刻的理解。

几年来,我一直在从事新媒体领域的课堂教学工作,这是我给北京外国语大学的学生开设的一门专业课程。在这门课程的教学中我发现,新媒体研究和教学领域经常遭遇的两个问题。

第一,缺乏全面阐述新媒体基础理论的经典教材。新媒体作为一个相对性的 概念,产生于20世纪下半叶,它缺乏已形成共识的清晰内涵和外延界定。对新媒 体的理解主要有三种趋向:一是从历史的视角把握媒体的形态演变,解释传统媒介 现象之外的新的媒体现象;二是聚焦于技术特性,将依托新的媒介技术衍生的产品 和服务视为新媒体,并对之进行探讨和研究;三是从文化的角度切入,将新媒体放 在社会的大环境下,分析其对整个社会结构及不同社会群体带来的变革。在我看 来,这三种研究倾向都有其产生的历史背景和存在的必要性,但我更倾向于第三种 看待新媒体的方式,因为在这种宏观的、横向的语境下,新媒体的内涵和外延得到 了极大的丰富,我们可以从多种视角、运用多门学科的方法介入新媒体研究,社会 学、哲学、经济学、政治学、心理学等都能在此找到用武之地。 我经常在想,如果能 够有一本以文化视角为主导、结合历史和技术发展研究为辅助的全面阐述新媒体 基础理论的教材,将面向此领域的诸多碎片式研究成果加以整合,形成一个相对完 整和成熟的认识新媒体的框架,那将为初涉此领域或对此领域感兴趣的青年学者 减少许多通往学术探索路径的"荆棘",让他们真正感受到此领域研究成果的丰硕 和前沿,研究方法的科学与多元,研究视角的多维与交叉。这将是一件多么让人兴 奋的工程!

第二,中、西方在新媒体研究领域还没有建立起共同的话语空间。虽然中国的新媒体研究在上世纪80年代即有记载,但研究数量的急剧膨胀和研究领域中迅速兴起发生在2000年以后。从2004年开始,国内研究新媒体的学者以各种方式云集,交流研究心得,举办了"新媒体与传播革新论坛"和"中国网络传播学年会"。2007年,这两个学术平台经过协调合二为一。中国新媒体与网络传播史论研究会随后获批成立,新媒体研究获得了组织保证。国内学者对新媒体领域所作的大量研究不能抹煞,其中很多研究无论是方法还是结论都显示着卓有成效的创新,而对国内的诸多新媒体现象和问题的关注推进了这一学科在中国的现实发展。中国新

媒体的发展虽晚于西方,但其步伐和追赶速度惊人,新媒体在中国转型阶段的地位特殊,正带来深远的社会变革,许多相关现象和问题独具中国特色,相关研究能丰富新媒体研究的全球图景。同时,我们不能忽视国外学界相对于我们更早建立了此领域的研究规范,并已有一些相当成熟的研究成果作为学科支撑。而受制于语言的障碍,即使是英语较为出色的学者,英语也只是个人的第二语言,这和母语学者对大量英文原著及文献的涉猎毕竟无法同日而语,这就导致国内不少新媒体研究存在重复劳动的嫌疑,滞后于国际学术界的研究水准,难以和国际学者形成对话的局面。做研究是一个"站在巨人肩上"的工作,新的研究应该以已有的研究为起点,并在其基础上力求创新。每一个研究者都应该自觉地将自我纳入一个系统工程的某一环节,为搭建整个学术"大厦"添砖增瓦,而不是抛弃已有的研究成果单打独斗。人人都想盖大厦,则人人皆只能垒平房。从这个角度出发,如果能有机会向国内学者介绍更多在新媒体研究中有着重要地位的英文文献,则不失为一件幸事。

2009 年,北京外国语大学和新西兰奥克兰大学的诸位关注新媒体的学者达成了一个共识:编辑一本英文论文集,向中国学者全面介绍西方经典的新媒体研究论文。两校学者经过一系列沟通和协商,经历了策划、选稿和编辑等过程,终于将之付梓,辛苦之余更感到欣慰。

这本论文集旨在为解决前述两个困惑提供探索的蓝本。虽然它没有依循教材体例,但并不有损其全面性。读本共分十个单元,每个单元精选了两篇论文。这些文章的作者遍布全球,既有欧美学者,也不乏亚洲同行。除了第一单元从历史视角出发,将新媒体的特征与传统媒介相比较,回答了"什么是新媒体?"这一看似简单实难回答的概念问题以外,其他九个单元皆为横向文化视角的研究成果,分别探讨了新媒体与经济、新媒体与政治、新媒体的文化涵义、新媒体与青年文化、新媒体与身份、虚拟空间、数字时代的性别与性征、数字时代的人、电子人和后人类等广受关注的新媒体研究领域,基本囊括了新媒体研究中的焦点。编者为每一篇论文配置了中文导读和相关注释,就是希望读本可以在某种程度上起到一本教材的作用。凭借它搭建的认识新媒体的基本框架,供新媒体学科的教师和学生作为进入这门学科的必要参考书籍。在选编这本小册子时,我更希望能为国内研究新媒体的年轻学者了解国外新媒体研究的焦点问题尽绵薄之力。编者在选取单元论文时,综合考虑了研究问题、方法与结论的互补性和代表性,吸纳了更多跨学科研究新媒体的精华,相信对此感兴趣的学者必能从中获得学术的养分,感受研究乐趣。

我并不指望这本论文集能够解决现今新媒体研究中的所有问题,这本来就是不切实际的奢望;我也不希望将之视为一种功利的工具,以帮助我们找到新媒体研究中具有普适意义的学理与知识;我更不赞同将西方的研究成果和话语资源视为"先进",直接为我所用。我认为,新媒体研究如果一定要用普适性的理论去束缚,则会让这个领域的道路越走越窄;相反地,我更倾向于为大家提供一种体会和理解

新媒体现象的平台,提供一个多元的思考和讨论新媒体问题的空间,观照由新媒体 兴起带来的一系列社会变革,观察不同领域学者运用自己擅长的研究方法对新媒体引发的多种话题和文化现象进行阐释、解读和呈现。这或许更符合新媒体发展 的自然逻辑和精神实质——为人们开启"观点的自由市场",在观点碰撞中启发灵感、形成认知。

新媒体日新月异的技术革新也使这本读本自诞生就面临一个自己无法解决的悖论。编者希望带给新媒体研究者更多前沿的研究观念,但由于新媒体自身的发展以我们无法想见的速度推进,这些发展的本身及其对社会的作用力将给学界不断带来新的研究话题。读本中涉及的研究领域,亦因为技术和社会的发展变革而存在许多新的变动趋势。这是读本无法回避、也不可弥补的缺憾。所幸,任何新的研究都需要以已有的成果为起点,这些经典文献还是能为研究者提供借鉴价值。

这本书的中文导读和选编的工作由我和同事翟峥共同完成。在此,我也感谢 他的贡献。

新媒体在中国的兴起为国人搭建了开放、自由的意见沟通和交流平台,这必将推动中国朝着建构现代公民社会的方向迈进。作为这个时代的学者,我们很幸运,因为我们研究的不仅是一种媒体,更是研究我们所处的整个社会。我们将用笔记录时代的变化。

**王士宇** 2013 年于北京

## CONTENTS

Unit 1: Fro	om Analogue to Digital: What Is New Media? 1
Text I	What Is New Media? 3
Text II	Monsters in Cyberspace: Cyberphobia and Cultural Panic in the
	Information Age
Unit 2: Ec	onomic Implications of the New Media: Industries and
Ma	arkets 31
Text III	Capitalism's Linguistic Turn
Text IV	The Political Economy of Peer Production
Unit 3: Po	litical Implications of New Media: Citizenship and the
Pu	blic Sphere 69
Text V	The Internet as Democracy ····· 71
Text VI	Blogs of War: Weblogs as News ····· 88
Unit 4: Cu	ltural Implications of New Media $(I)$ : Globalization and
Lo	cal Culture 109
Text VII	Users Like You? Theorizing Agency in User-Generated Content · · · 111
Text VIII	Interactive Audiences? The "Collective Intelligence" of Media
	Fans
Unit 5: Cu	ltural Implications of New Media(II): Digital Cultures
an	d Subcultures
Text IX	Copyright in a Collaborative Age
Text X	The Rhetorics and Myths of Anti-piracy Campaigns: Criminalization,
	Moral Pedagogy and Capitalist Property Relations in the Classroom · · · 153
Unit 6: Yo	uth Culture and New Media 169
Text XI	The Cyberself: the Self-ing Project Goes Online, Symbolic
	Interaction in the Digital Age
Text XII	Whose Space Is MySpace? A Content Analysis of MySpace Profiles · · · 183

20:	
201	
203	
217	
Unit 8: Virtual Community	
sion, and	
23	
244	
Unit 9: Gender and Sexuality in the Digital Age 25	
oscience ······ 26	
274	
Unit 10: Humans, Cyborgs and Posthumans in the Digital Age 28	
roadband	
291	
ommunication and	
zed Society" ····· 303	

# Unit 1

From Analogue to Digital: What Is New Media?



#### 导 读

什么是新媒体?这个问题看似简单,但经常会难倒不少正在从事新媒体行业工作和研究的人。毋庸置疑,"新媒体"是针对"旧媒体"(或称为"传统媒体")而提出的概念,人们对于新媒体的定义和认知往往来自于将其与以往媒体进行对比的过程,而不同的学者拥有不同的视角和解释。本文选自莱夫·马诺维奇教授的《新媒体的语言》一书,该书出版于2001年,在学术界引发不小的轰动,曾被评论界誉为"自麦克卢汉以来最具启发性且涉及媒体历史范围最广的著作",迄今也是国外许多大学研究新媒体学者的必读书目。

莱夫·马诺维奇笔下的"新媒体"是一个相对宽泛的概念,他认为新媒体是一种新的文化形式(cultural forms),因此其产生和发展都摆脱不了传统媒体文化的影响。他认为已有的研究大都将视野集中在新媒体的未来发展前景上,这类研究不足以解释作为新的文化形式的新媒体对传统媒体的继承和创新。在《新媒体的语言》中,他尝试去回答如下问题:新媒体继承了哪些传统文化语言,有什么创新?新媒体在构建虚拟世界时有什么独特之处?传统媒体的技术如何在新媒体中运用?马诺维奇认为新媒体发展的意义不只是出现了一种新的文化形式,它还对传统的文化形式进行了新的定义和重构,比如摄影、电影业。

本文是《新媒体的语言》的第一章,文中提出"新媒体"具有五个特征:第一,所有新媒体都由数字号码构成,通过一定的计算机程序操控、展示和运作。第二,新媒体具有调制性,它是由一系列可以具有独立结构性能的数字号码所组成的,无论是完整地展示层面还是微观的内部构成层面,都能自成一体。比如数字电影或网页是由一系列独立的元素——图片、声音、外形、动作构成的,把中间的任意元素提取出来,数字电影和网页依然能够运转。这两个最根本的特性决定了后面的三种特性,即自动性、多变性和可转换性。

这篇文章出版至今已近十年,新媒体的发展虽然日新月异,但让人惊奇的是文中的观点并不过时。它为我们了解新媒体提供了一种独特的视角,文中关于新媒体特性的表述在今天看来依然具有启发性。值得关注的是,作者马诺维奇是一个热衷新媒体写作的学者,他拥有自己的个人主页,并经常在网上发表自己的研究成果,感兴趣的读者不妨访问其网站以了解更多更新的研究信息。

#### 6

#### What Is New Media?

#### Lev Manovich1

What is new media? We may begin answering this question by listing the categories commonly discussed under this topic in the popular press: the Internet, Web sites, computer multimedia, computer games, CD-ROMs and DVD, virtual reality. Is this all there is to new media? What about television programmes shot on digital video and edited on computer workstations? Or feature films that use 3D animation and digital compositing? Shall we also count these as new media? What about images and textimage compositions – photographs, illustrations, layouts, ads-created on computers and then printed on paper? Where shall we stop?

As can be seen from these examples, the popular understanding of new media identifies it with the use of a computer for distribution and exhibition, rather than production. Accordingly, texts distributed on a computer (Websites and electronic books) are considered to be new media, whereas texts distributed on paper are not. Similarly, photographs that are put on a CD-ROM and require a computer to be viewed are considered new media; the same photographs printed in a book are not.

Shall we accept this definition? If we want to understand the effects of computerization on culture as a whole, I think it is too limiting. There is no reason to privilege the computer as a machine for the exhibition and distribution of media over the computer as a tool for media production or as a media storage device. All have the same potential to change existing cultural languages. And all have the same potential to leave culture as it is. The last scenario is unlikely, however. What is more likely is that just as the printing press in the fourteenth century and photography in the nineteenth century had a revolutionary impact on the development of modern society and culture, today we are in the middle of a new media revolution - the shift of all culture to computermediated forms of production, distribution, and communication. This new revolution is arguably more profound than the previous ones, and we are just beginning to register its initial effects. Indeed, the introduction of the printing press affected only one stage of cultural communication - the distribution of media. Similarly, the introduction of photography affected only one type of cultural communication - still images. In contrast, the computer media revolution affects all stages of communication, including acquisition, manipulation, storage, and distribution; it also affects all types of media -

texts, still images, moving images, sound, and spatial constructions.

How shall we begin to map out the effects of this fundamental shift? What are the ways in which the use of computers to record, store, create, and distribute media makes it "new"?

#### **How Media Became New**

We should not be surprised that both trajectories – the development of modern media and the development of computers – begin around the same time. Both media machines and computing machines were absolutely necessary for the functioning of modern mass societies. The ability to disseminate the same texts, images, and sounds to millions of citizens – thus assuring the same ideological beliefs – was as essential as the ability to keep track of their birth records, employment records, medical records, and police records. Photography, film, the offset printing press, radio, and television made the former possible while computers made possible the latter. Mass media and data processing are complementary technologies; they appear together and develop side by side, making modern mass society possible.

For a long time the two trajectories ran in parallel without ever crossing paths. Throughout the nineteenth and the early twentieth centuries, numerous mechanical and electrical tabulators and calculators were developed; they gradually became faster and their use more widespread. In a parallel movement, we witness the rise of modern media that allow the storage of images, image sequences, sounds, and texts in different material forms – photographic plates, film stock, gramophone records, etc.

#### **Principles of New Media**

The identity of media has changed even more dramatically than that of the computer. Below I summarize some of the key differences between old and new media. In compiling this list of differences, I tried to arrange them in a logical order. That is, the last three principles are dependent on the first two. This is not dissimilar to axiomatic logic, in which certain axioms are taken as starting points and further theorems are proved on their basis. Not every new media object obeys these principles. They should be considered not as absolute laws but rather as general tendencies of a culture undergoing computerization. As computerization affects deeper and deeper layers of culture, these tendencies will increasingly manifest themselves.

#### 1. Numerical Representation

All new media objects, whether created from scratch on computers or converted from analog media sources, are composed of digital code; they are numerical 9

representations. This fact has two key consequences:

- a. A new media object can be described formally (mathematically). For instance, an image or a shape can be described using a mathematical function.
- b. A new media object is subject to algorithmic manipulation. For instance, by applying appropriate algorithms, we can automatically remove "noise" from a photograph, improve its contrast, locate the edges of the shapes, or change its proportions. In short, "media becomes programmable".

When new media objects are created on computers, they originate in numerical form. But many new media objects are converted from various forms of old media. Although most readers understand the difference between analog and digital media, a few notes should be added on the terminology and the conversion process itself. Converting continuous data into a numerical representation is called "digitization". Digitization consists of two steps: sampling and quantification. First, data is "sampled", most often at regular intervals, such as the grid of pixels used to represent a digital image. The frequency of sampling is referred to as "resolution". Sampling turns continuous data into "discrete" data, that is, data occurring in distinct units: people, the pages of a book, pixels. Second, each sample is "quantified", that is, it is assigned a numerical value drawn from a defined range (such as 0 – 255 in the case of an 8-bit greyscale image).

While some old media such as photography and sculpture are truly continuous, most involve the combination of continuous and discrete coding. One example is motion picture film: each frame is a continuous photograph, but time is broken into a number of samples (frames). Video goes one step further by sampling the frame along the vertical dimension (scan lines). Similarly, a photograph printed using a halftone process combines discrete and continuous representations. Such a photograph consists of a number of orderly dots (i.e., samples), although the diameters and areas of dots vary continuously. As the last example demonstrates, while modern media contain levels of discrete representation, the samples are never quantified. This quantification of samples is the crucial step accomplished by digitization. But why, we may ask, are modern media technologies often in part discrete? The key assumption of modern semiotics is that communication requires discrete units. Without discrete units, there is no language. As Roland Barthes put it, "Language is, as it were, that which divides reality (for instance, the continuous spectrum of the colors is verbally reduced to a series of discontinuous terms). "2 In assuming that any form of communication requires a discrete representation, semioticians<sup>3</sup> took human language as the prototypical example of a communication system. A human language is discrete on most scales: We speak in

sentences; a sentence is made from words; a word consists of morphemes, and so on.

The most likely reason modern media has discrete levels is because it emerged during the Industrial Revolution. In the nineteenth century, a new organization of production known as the factory system gradually replaced artisan labour. It reached its classical form when Henry Ford installed the first assembly line in his factory in 1913. The assembly line relied on two principles. The first was standardization of parts, already employed in the production of military uniforms in the nineteenth century. The second, newer principle was the separation of the production process into a set of simple, repetitive, and sequential activities that could be executed by workers who did not have to master the entire process and could be easily replaced.

Not surprisingly, modern media follows the logic of the factory, not only in terms of division of labour as witnessed in Hollywood film studios, animation studios, and television production, but also on the level of material organization. The invention of typesetting machines in the 1880s industrialized publishing while leading to a standardization of both type design and fonts (number and types). In the 1890s cinema combined automatically produced images (via photography) with a mechanical projector. This required standardization of both image dimensions (size, frame ratio, contrast) and temporal sampling rate. Even earlier, in the 1880s, the first television systems already involved standardization of sampling both in time and space. These modern media systems also followed factory logic in that, once a new "model" (a film, a photograph, an audio recording) was introduced, numerous identical media copies would be produced from this master.

#### 2. Modularity

This principle can be called the "fractal structure of new media". Just as a fractal has the same structure on different scales, a new media object has the same modular structure throughout. Media elements, be they images, sounds, shapes, or behaviors, are represented as collections of discrete samples (pixels, polygons, voxels, characters, scripts). These elements are assembled into larger-scale objects but continue to maintain their separate identities. The objects themselves can be combined into even larger objects – again, without losing their independence. For example, a multimedia "movie" authored in popular Macromedia Director software may consist of hundreds of still images, QuickTime movies, and sounds that are stored separately and loaded at run time. Because all elements are stored independently, they can be modified at any time without having to change the Director "movie" itself. These "movies" can be assembled into a larger "movie", and so on.

The World Wide Web as a whole is also completely modular. It consists of

numerous Web pages, each in its turn consisting of separate media elements. Every element can always be accessed on its own. Normally we think of elements as belonging to their corresponding Web sites, but this is just a convention, reinforced by commercial Web browsers. In addition to using the metaphor of a fractal, we can also make an analogy between the modularity of new media, and structured computer programming. Structural computer programming, which became standard in the 1970s, involves writing small and self-sufficient modules (called in different computer languages "subroutines", "functions", "procedures", scripts), which are then assembled into larger programs. Many new media objects are in fact computer programs that follow structural programming style.

#### 3. Automation

The numerical coding of media (principle 1) and the modular structure of a media object (principle 2) allow for the automation of many operations involved in media creation, manipulation, and access. Thus human intentionality can be removed from the creative process, at least in part.

Following are some examples of what can be called "low-level" automation of media creation, in which the computer user modifies or creates from scratch a media object using templates or simple algorithms. In Hollywood films, flocks of birds, ant colonies, and crowds of people ate automatically created by AL (Artificial Life) software. Word processing, page layout, presentation, and Web creation programmes come with "agents" that can automatically create the layout of a document. Writing software helps the user to create literary narratives using highly formalized genre conventions. Researchers are also working on what can be called "high-level" automation of media creation, which requires a computer to understand, to a certain degree, the meanings embedded in the objects being generated, that is, their semantics. This research can be seen as part of a larger project of Artificial Intelligence (AI).

The area of new media where the average computer user encountered AI in the 1990s was not, however, the human-computer interface, but computer games. Almost every commercial game included a component called an "AI engine", which stands for the part of the game's computer code that controls its characters. AI engines use a variety of approaches to simulate human intelligence, from rule-based systems to neural networks. Like AI expert systems, the characters in computer games have expertise in some well-defined but narrow area such as attacking the user. Along with "low-level" and "high-level" automation of media creation, another area of media use subjected to increasing automation is media access. The switch to computers as a means of storing