

# Digital Technology & Concepts in Modern Art

— An Interview with LiQin Tan

当代艺术中的数码技术与观念问题——谭力勤访谈录

**Duan:** Hi, Li! First I congratulate you on the success with the solo exhibition at Beijing World Art Museum and the upcoming solo exhibition at 798 Yuanfen New Media Art Space. As your works are mainly digital animation-installation, related to the subject of contemporary art, I would like you to talk about the connection between digital artwork and contemporary art creation. As a case study, I am strongly interested in how you transitioned from traditional painting and installation into digital forms. For instance, you studied traditional Chinese painting originally, then you turned to installation art in the period of “85 New Art Movement,” and currently you are working on digital animation-installations. During this period of transition, how did you find your own place in the new art trend? Namely, how did the “85 New Art Movement” affect your art development and what influence did the overseas studies have on your artwork making? A related issue also ensues between understanding the individual artist in relation to his/her cultural background; please shed some light with your personal experiences.

**Tan:** Thank you for your support. I was determined to study traditional Chinese painting before 1985, first in meticulous form and then in freehand. At the same time, I spent time researching contemporary Chinese brush-ink artwork from artists such as Zhou Sicong, Li Shinan and Shi Hu, and shadowed two of them with works of nature (via drawings and sketches). Later on, I commented on their art in writing, and published findings in a variety of art magazines in China. I continued to develop from my advanced studies at the Central Academy of Fine Arts from 1982 to 1984. By then, I had completely changed my thinking and art creation.

From late 1984 to early 1985, I completed a series of works named the Myriad Creatures—the Reversed Return of Calligraphy and Painting in Changsha. The four treasures of the study: brush, ink-stick, ink-slab and rice paper were used to make an eight-diagram chart in “I-Ching.” The idea behind it is that “Calligraphy and painting come from the same origin and they can be reversed as well to their original forms.” In form, the original can be the common tool — the four treasures of the study — while in concept, it can be the theories of the ancient Chinese

classic: I-Ching. The thought is the expansion of the concept “Reversed Return” for contemporary Chinese art that I put forth in the past. The works were published by Art magazine in 1986 and commented on by famous art critics such as Shu Qun and Zhou Yan.

“85 New Art Movement” would go on to greatly influence my later artistic life when I proceeded to complete my graduate study in Canada. The installation “Modern Physics and Oriental Mysticism” that I made in 1988 was influenced by the ‘85 series books of Going to the Future. I studied at the internationally recognized animation school Sheridan College from 1995 to 1996 and after that, I devoted myself to digital art.

The two transitions mentioned above are the result of the blending of my natural personality with the impact that contemporary art had on me. I was born curious and acute, fond of studying and conscious about the future, and I was easy tired of repeating old skills and ideas. Transitioning from Chinese painting to installation art felt natural. Though they are different in form, the installation art still uses the same four treasures of the study and involves the same philosophies. However, turning to digital art, I

Dr. Duan Lian 段炼博士

Art Critic, Professor of Concordia University

艺术批评家，加拿大康戈利亚大学教授

experienced a painful learning curve of computer technologies. In the succeeding five years though, I produced some 3D animation works. Most of the time I was overcoming technical problems such as 3D software, computer programming and post-production skills. After 2000, the teaching condition and technology popularity permitted me to bring my concepts and enthusiasm into play. I blended such acquired digital technologies and unique concepts into animation installation, interactive animation and conceptual animation.

**Duan:** Continuing with your response, I would like you to talk about the relation between tech and art creation, especially the technical progress and art regression under the recent cultural environment: such as in the global economic system, cultural differences between oriental and western, and China’s rapid development in relation to powerful humanitarian values from the west. First, please talk about the status of digital art within contemporary art and education, and then the differences and potential conflicts of tech and art. At last please talk about your digital art creation and how did you deal with the relevance between tech and art. I wish to gain a transparent view of contemporary art from your personal experiences.

**Tan:** The relation between tech and art as you mentioned is an important issue in Chinese contemporary art. There is a saying that “technology progresses and art regresses.” Technology and art have a wonderful relationship and they have been developing in harmony for thousands of years. When technology develops rapidly and artists progress hesitantly, sharp conflicts can occur between them. The ancients would say, “Technology and art are interlinked to each other”, namely that technology and art do not collide with each other. Only when technology grows to concern politics and the future of a country, technology and art may depart. The digital art development in China reveals the laggard progress of artists with the various conflicts that are now coming forth - initiating a tendency to neglect technology.

Nam June Paik, the founding father of video art shared: as collage technology has replaced oil paintings, CRT (Cathode Ray Tube) is certain to replace canvas. In present, digital technology has replaced CRTs, various 3D, virtual and particle technologies will be taking the place of video — which is the harsh reality of scientific development. If digital

代物理与东方神秘主义”装置和表演系列作品，便是“八五美术新潮”期间《走向未来丛书》所给我的影响。但这类作品同时受蒙特利尔当代装置作品影响，融入了西方观念和技术。1995至1996年求学于世界著名谢尔丹动画学院，后全力投身于数码艺术直到今日。

上述此两次“转向”过程其实都是我性格与当代艺术背景的自然互动。我生来好奇敏锐，喜探讨和琢磨未来的事，最厌倦重复自己或者历史上已有的技法和观点。从中国画转到装置，我当时感到自然，并无折磨感，虽然形式完全不一样，但使用的还是文房四宝，并涉及中国画哲理，内在的深层关系非常明显。然而，后来转向数码艺术则经历过非常痛苦的电脑技术学习过程。在随后的五年中，虽也创作了一些静帧三维动画，但大部分时间在攻克复杂的三维软件、电脑程序语言、后期制作工艺等等技术性问题。2000年后，美国大学的教学条件和近年技术的普及，使我有机会发挥自己的理念和创作热情，我可利用熟悉的数码技法和新颖观念创造系列数码艺术，把我三十多年来积累的各种技法和理念，全部融入到我的动画装置，互动动画和观念动画作品中。

段：承接你上面的回答，我想请你进一步谈一下技术与艺术的关系问题，尤其是在当代文化条件下，例如在全球化的经济体制、东方与西方的思想文化差异、西方强势文化与中国高速发展的时代条件下，技术进步与艺术退步的问题。请你先谈一下数码艺术在当代美术和美术教育中的地位，再谈一下技术和艺术的可能冲突，以及各自有什么不同，然后谈一下你自己的数码艺术创作，以及你怎样处理技术与艺术的关系。我关心的是你的个案，希望以小见大，从你的个案来管窥当代美术的现状。

谭：你提的技术和艺术的关系是中国当代美术的一个重要问题，其中“技术进步和艺术退步”提法也非常有创意。技术和艺术关系几千年来发展非常和谐，只有当技术发展异常迅速，艺术家跟进速度迟疑时，矛盾才会突出。古人云“技艺互通”，也就是说技艺本身并不冲突，只有某时代技术发展成为政治关注并与国家前途息息相关时，技术和艺术才有可能分道扬镳。中国当代美术中数码艺术的发展明显突出艺术家的跟进矛盾，因此冲突也随即出现。目前普遍呈现出轻视技术的倾向。

影像艺术之父白南准曾说过“正如拼贴技巧取代了油画一样，阴极射线管一定会取代画布”。当代数码技术代替了阴极射线管技术，各种三维、虚拟技术正逐渐取代影像地位，这是科技发展的残酷现实。当代数码艺术家要想有创意，就必须保持技术上的同步、观念上的更新。

观念和和技术都是数码艺术的核心要素，两者平行俱进，缺一不可。我在SIGGRAPH担任评委多年，筛选作品时，都要求艺术家观念上的创新、技术上也必须要有新的或独创的应用方法。我曾在国内某一讨论会上提出过“科技也是创作源泉”的观点，因当今科技发展迅猛，而许多新的技术导致产生了新的艺术手段和艺术内涵，许多现代数码艺术家都直接从技术入手，寻找灵感。国内当代美术界轻技术现象较浓，

artists desire to make updated works, they have to keep in step with technical progress and continually update their concepts.

Both conceptual thinking and technology are the core elements of digital art, which go forward in parallel and neither of which is dispensable. As a juror and core member of the SIGGRAPH committee for a number of years, we require artists to have both innovative ideas and new-ways to use or create an application of technology. At a seminar in China, I once put forth the point of view that “technology would be a new source of inspiration.” Today, with rapid developments in science, many new technologies help bring about newly possible means of art. Digital artists can use technology to find inspirations.

In the art circle of China today, there is a thick phenomenon that technology is belittled, as artists there think that technology is solely a tool for conceptual innovation. The great force of new technology utilizes conceptual innovation and the enormous new creative spaces brought about by increasingly updated technologies are neglected. This is the reason video technology, such as 3D animation, advanced rendering, virtual reality, interaction, biological and optical technologies are rarely seen in the digital art circles in China. Such ignorance of technology limits their scope and development for innovation. Presently, many are debating whether video should be retained in digital art because there is a huge technological leap from video to 3D animation to virtual reality. Western art critics also point out that this leap is a hard and long span, and they think that video production may soon become a pronoun of tradition of art history.

This past January, when I delivered a lecture in a famous art institute in Beijing, a student suggested that technology was invented in the west and Chinese should not pursue the science of foreigners and that they should be rooted in studying our own culture. My reply was that science has neither boundary of nationality nor classification of class and origin. What was invented in the west can be mastered and transcended by Chinese people. It is right to study our own ethnic culture, but in this digital age, it is necessary to integrate the national culture of art with the learning of digital technology.

During the progression of digital art creation and teaching, I always insist on the idea that “Technology and art cohabit and go forward in a parallel way,” and require my students to quest for new art forms and to discover digital technology on their own terms. Take my early-stage works as example: It mainly probed into the concept of digital and primitive, while for animation character shaping and installation design, I was inspired by North American Indians and Chinese ancient culture; on technique, I applied digital printing on rawhide, and projected them on a calf. If we say two-side projection on rawhide is a kind of innovation on art form, digital printing on rawhide is a newly applied technique. That type of creative thinking has been adhered to until now, with a reflecting dual breakthrough on each digital artwork for both art form and technology.

**Duan:** The mainstream of contemporary art is conceptual art. How should we treat the conceptual issues in digital art, a new art form that appears in late years? Relatively, installation and video are also new forms of contemporary art, as well as important modes of conceptual art. Nowadays, digital art has not become an important form of conceptual art. Then what do you care about more in digital art practice, concept or technology?

普遍认为技术只是观念创新的手段，忽略了技术对观念创新的巨大作用力和技术日益更新所带来的巨大空间。这也是为什么国内大部分当代数字艺术家停留在影像技术制作的层面，而高级三维动画技术、高级渲染手段、虚拟现实技术，以及各种复杂的互动技术、现代生物技术、现代光学应用技术等在国内数字艺术圈中很少见到。这种轻技术现象，限制了他们的创新范围和发展。影像是否保留于数码艺术，现许多人还在争论，因为从影像到三维动画、虚拟现实也是一种技术层次上的跃进。西方艺术评论家也指出，这是一种艰难而漫长的跨越。在当代数字艺术圈中，有人认为影像也许很快会作为传统和历史的代名词。

今年一月我在北京某一著名美术学院讲座，一学生便提出技术是西方人所发明，中国人不应去追求洋人科技，而应扎根於自己的民族风格研究。我当时的回答是科技是没有民族性的，更没有阶级和出身成分之分。西人的科技发明，中国人不但可掌握并可超过之。着手自己的民族风格研究不错，但在这数码时代，必须把艺术的民族风格和数字技术的学习紧密结合起来。

在我的数码艺术创作和教学中，一直坚持技术和艺术并存、平行发展的观点，不断要求自己和学生艺术观念和文化上进行新的探索，同时也必须在技术上进行新的尝试和突破。以我的早期作品为例，重点探讨数码与原始观念，其中动画人物造型和装置设计是从北美印第安人和中国远古文化得到的灵感；其次在技术上为首次应用数码印刷和直接印制动画静帧于兽皮上，首次用投影机投射到自己新制作的小牛皮上。如果说投射是一种艺术形式创新，而数码兽皮印制则是一种应用技术突破。这种创作思路一直坚持到现在，我在每一套新数码艺术系列中都会体现出艺术观念和技术的双重突破和创新。

段：顺着上面的讨论，我现在要纵向进入更具体的问题。当代艺术的主流是观念艺术，西方与中国皆然。数码艺术作为近十年才出现的一个新起艺术样式，应该怎样处理观念性问题。相对而言，装置和影像也是当代艺术中的新样式，它们现在是观念艺术的重要方式。今天，数码艺术似乎还没来得及成为观念艺术的一个重要方式，那么，在你自己的数码艺术实践中，你更关心什么，是观念还是技术？如果这二者你都同样关心，可否举一两件具体的作品为例，谈一谈你怎样用数码技术来进行观念表述，你最后达到了什么效果？

亘：当今数码艺术的表现轴心是观念与技术的融合，只有技术突破，数码艺术才不会被忽略，只有艺术的发展，数码技术才会更加让人心旷神怡。首先，影像技术易掌握，与观念艺术结合相对简单。而三维动画，虚拟现实等高科技掌握周期较长，所以，科技含量高的艺术在中国并没成为观念艺术的重要部分。其次，许多有才华的艺术家很难花上几年精力去攻破技术，为此他们宁愿停留在影像阶段或找人制作，或用较浅显的三维技法。

我前期数码艺术创作主要是探索一种文化关联，近年作品倾向于把观念动画、动画装置和互动动画结合起来，并在北京大学成立了此类动画研究室和开设此类课程。例如：在“重量中的红色波普”互动装置作品中，观众通过选择农业口号这一富有时代特征的文字载体，来使巨大的秤实体失衡，其中秤砣部分的动画也同步互动，从而揭示出观念赋有重量的主题。如同主题，让观念的文字去驱动实体的秤，是最大的技术难点。我们通过写程序来驱动步进电机，并进行了大量的实验来改变秤的状态。同时利用多台电脑进行网络控制，以便确保动画播放的同步和切换。

如同我在前一问题中提到的，当代数码艺术所追求的是在观念和 技术两方面同时突破，SIGGRAPH是树立了此一评审标准的组织。我的作品被选入SIGGRAPH便是遵守此规律。例如：“锈脸”系列，旨在探讨人类精神、肉体腐蚀与自身行为的关联，也就是说人类勤劳与懒惰、进取和萎缩都与精神的闪烁和腐蚀紧密相连。“锈脸”都直接以数码形式印制于生锈的钢板上，在每一“锈脸”上，观众都可看到其胸腔从出生到锈落的微型三维动画。在作品的中下方，由四部电脑组合展示一组大脑生锈的观念动画，其中大脑全为人体组成。锈脸人物造型和动画都为Softimage/XSI三维制作，头部全采用了各种铁锈肌理成像。主体动画为5分钟，分辨率为14000x12000像素。大脑生锈动画

If you care about both, can you take one or two works as examples to talk about how you represented concept with digital technology and what outcome did you accomplish.

**Tan:** The representation axis of digital art is the integration of concept and technology. On condition that technical innovation is attained, digital art won't be neglected, and with art advanced concept, digital art will excite people. First, video technology is easier to be grasped and integrated with conceptual art, while 3D animation, virtual reality and other advanced technologies have a long learning curve, so the art with advanced technology has not been an important part of conceptual art. Second, many talented artists are not apt to spend years grasping the technical skills and would rather remain in the video stage, ask for help or use simple 3D skills.

My early-stage art was focused on cultural connections, and my later works integrate conceptual animation, animation installation and interactive animation. I also established a studio to do the research with some student assistants. Take the interactive installation “Conceptual Weight” as example. Audiences broke the balance of the large scale by adopting agricultural slogan the character carrier bearing the sign of the times with the synchronization of the animation of the weight, indicating the theme that “concepts are endowed with weight”. To drive estimative weight by idealistic characters was a tough technical challenge and we drove the stepping motor by a program, and made plenty of experiments to change the status of the scale. Meanwhile, we used network controls with several computers to guarantee the synchronization of switching concepts and animation.

As I mentioned in previous issues, digital art is pursued by conceptual and technological innovation at the same time. SIGGRAPH is an organization that sets these evaluation criteria. For instance, my “Rusty Faces” series, selected by SIGGRAPH, was aiming to present a contemporary artistic interpretation of the deterioration of mind, body, and spirit by harmful and self-destructive human behaviors both constantly and gradually. In each “rusty face”, the audience can see a micro 3D animation of its embryo cell from birth to rusting-off. A large conceptual animation of a brain rusting was displayed by a combination of four computers that was fabricated by Softimage/XSI and Premiere Pro through their particle system. It lasted for 5 minutes, with a resolution of 14000x12000 pixels in each frame, which consisted of a multilayer of black-and-white masks and was controlled by the faction of transparency. Such new-ways in applying technique into the artwork was considered, at that time, as core elements to take part in the SIGGRAPH exhibition.

**Duan:** Thank you for your encompassing explanation. I would like to extend my questions. Please talk about your digital art teaching experiences in Singapore, America and Beijing. In the first place, do you teach technology or art? Second, what are the similarities and differences between your teaching and education you received in China and Canada, in particular, between ideas of educational concepts and teaching methods? What do you think of these similarities and differences and their impacts on your art and teaching? Then, why do you think your teaching philosophy and methods are feasible and especially practical in the context of contemporary Chinese art?

**Tan:** Actually, I teach technology and art at the same time. I teach how to utilize high-tech in artistic creation and how to study technology via

通过多层次黑白面罩和透明功能控制成功和数码锈钢印制进展——在当时而言，此关键技术的应用突破，是构成此作品的重要部分，也是打入重要展览的一个核心要素。

段：谢谢你的详细阐述。我现在要横向扩展我的问题，请你谈一谈你在新加坡、美国和北京的数码艺术教学实践。首先，你是在教技术还是艺术？其次，你的教学与你过去在中国和加拿大接受的艺术教育有什么相似和不同，尤其是教育理念和教学方法方面的相似和不同？你怎样思考这些异同、这些异同对你的艺术和教学有什么影响？然后，你认为你现在的教学理念和方法为什么是可行的，特别是在中国当代艺术的语境中是符合实际的？

亘：这应该说是同时教技术和艺术，教怎样用高科技来从事艺术创作，用新的艺术思维方式来研究技术。三维动画的技术性非常强，我在北美教授一年级学生除欣赏课外，大部分要求打好扎实的技术根底。到二年级以后，会逐渐增加创作能力、构图、色彩和光的表现力，第四年级便集中于毕业创作。从表层看，我的这些课程与国内没有太大区别，但理念和教学方法上差别较大。

其一，教学体制上，国内动画学院大部分与美术学院分治，例如，目前中国最好的动画专业在传媒大学，而不是美术学院。国外动画专业大多数属于美术学院的一部分，动画教学与艺术创作需紧密结合。

其二，教学观念上国内大部分仍以二维实验动画为主，不直接与产业挂钩，这样也造成国内技术基础以实验动画为主（二维平面绘画），强调艺术功力，文化根基。北美则相反，大部分课程直接与动画产业挂钩，以三维为主，以三维技术为基础课，强调技术与艺术并重，技术成分较高。

其三，关于对动画理解的差异，国内受美术电影制片厂制作风格影响较深，忽略了西方动画界所注重的动画原理。国内动画界普遍存在的问题是，例如走路的动作像是在地上滑动，没有重量，也没曲线和伸缩原理。

其四，关于教学法应用的不同，国内教学还是老师讲课，学生记录，师生互动较少。我发现许多动画学校上三维动画后期制作和技术含量的课程时，也采用同样的教学方法，学生动手的机会较少（因为学生多电脑少）。到北京大学授课后，我强调一位学生需一台电脑，强调学生动手操作的重要性。我还采用师生讨论的方式和自我发现教学法，让学生自己寻找、提出和解决问题。

其五，国内动画教学基本停留在视频制作上，为此，我在北大和传媒大学开设了互动动画、动画装置和观念动画课程，旨在引导中国学生走向动画创作的多元化。

其六，关于动画文化差异，国内强调寓教于乐、文以载道，美国文化强调实用主义、个人精神。作为一个在北美居住二十多年的华人，我深深理解这些文化的异同和源头。这使我在中国教学时能根据学生的文化思维方式进行启发和诱导，有机地把两种文化结合起来。

随着技术的教育和普及，数码艺术应该成为大众教学，就目前状况而言，数码艺术基本分为两种发展趋势，一种我们俗称为产业数码艺术，其宗旨主要以商业为目的，走大众路线，如电视广告、三维故事片、商业游戏、工业制作、军事虚拟等。第二种是无商业目的的纯艺术创新，重观念创新，忽视故事情节和普及性，重新技术应用与观念紧密结合。我自己属于后者，但在数码艺术教学中，我极力主张“两条腿走路”。在我的动画教学中，一部分是严格按照产业流程制定教学大纲，同时开设观念动画、动画装置和互动动画课程。这是因毕竟大部分学生毕业后会到产业数码艺术中工作，而只有极小部分会成为当代数码艺术的终生实践者。

从目前北大和传媒大学的教学效果来看，我的教学理念和方法还是可行的，至少给学生和学校提供了更多的选择。

段：回到你个人的艺术，请你谈一下这次展览，例如，这次展出的作品，展示了你个人的数码艺术的哪些方面、能让我们看到当前国

conceptual thinking. The 3D animation technology is complex with a multi-year learning curve. When teaching freshmen in North America, I usually require them to grasp a solid foundation of technology and art appreciation, and require sophomores to enhance their creation abilities, picture composition, and expression of color and light. Senior-level students dedicate their time to creating their thesis work. Our courses seem to be the same with those taught in China, but the teaching philosophy and methods differ greatly.

First, most domestic animation colleges are managed separately from art colleges. For instance, Communication University of China, instead of art colleges, is one of the best animation colleges. In Western countries, the animation specialty is usually a part of an art college, to allow animation and art creation to be integrated.

Second, with regard to teaching philosophy, most domestic colleges mainly teach 2D experimental animation — a topic that is completely disconnected with the animation industry, emphasizing traditional skills and cultural ethics. On the contrary, in North America, most courses are directly connected to the animation industry, with 3D technology as the core foundation, highlighting equal importance to technology and art.

Third, in terms of the differences in understanding animation, the old domestic animation production from Shanghai film studios has dominated the Chinese animation industry. Animators there neglect the animation principles that are stressed as top priority by the western animation industry. Consequently, the common problem of domestic animation is, for instance, the action of walking resembles sliding, without a sense of weight and the application of wave and squash-stretch principles.

Fourth, there is a difference in application of teaching methods. In China, teachers give lectures and student take notes — interaction is seldom. I found many animation schools adopt this teaching method in their 3D animation and production courses, and students have few practical chances (because the number of students far exceeds those of available computers). In a workshop in Beijing University, I stress that each student should use one computer and emphasize the importance of hands-on practice. I also uphold class discussions and adopt the self-discovery method so that students can find out, set forth and solve problems on their own.

Fifth, domestic animation teaching relies on video production; therefore, I set up such courses as interactive animation, animation installation and conceptual animation in the workshops at Beijing University and Communication University of China with an attempt to guide Chinese students to follow a path of diversified animation creation.

Sixth, as to differences in animation culture, Chinese animation culture emphasizes “education by implied meaning”, as well as “morals expressed in words”. American culture lays stress on pragmatism and individual spirit. As Chinese man living in North America for more than twenty years, I deeply understand these similarities and differences and their origins. Therefore, I am able to enlighten and guide Chinese students according to their culture-based way of thinking and combine Chinese and American cultures.

With the education and popularization of technology, digital art should be returned to the masses. As for the present condition, digital art is divided into two threads of development. The first one is commonly called digital

际数码艺术之发展的哪些方面、你在北京的学生的作品又展示了中国当代数码艺术之现状的哪些方面？你希望这次展览能给中国当代美术带来什么样的启示、能给中国高等院校的数码艺术教育以什么样的影响？

谭：中华世纪坛世界艺术馆和798缘分新媒体艺术中心的个展可以说是我数码艺术的一个回顾展，它汇集了2003-2008年间我的所有作品，1997-2002年之间的动画作品不在此展中。此展展出了数码兽皮印制作品与三维动画投影系列，代表作有“数码国王”、“数码皇后”和“数码道舞”等。“树结+4”数码原木印制系列的代表作有“树结脑额+4”、“树结核+4”和“树结胳膊+4”等。数码岩石印制作品与动画虚拟的代表作为“火岩浆人体+6”、“树结发+2”等。数码锈钢印制作品与动画装置的代表作为“锈脸”、“树结发+2”等。更重要的是展出了我在北大新创作的农业互动动画装置系列和数码无血系列，代表作为“重量中的红色波普”（古老大秤）、“碾磨中的永恒异体”（岩石碾盘）和稻谷风车装置。

这个展览的主题定为“数码原始”，扩展了我2003年的创作理念，但它还不能全部概括我所展作品的观念。我当时认为数码是短期的有限性的，而原始是永恒的无限的，任何现代数码技术都是可被取代的，而原始观念则永久地保留其自身含义。今天的现代科技也许是明天的原始技能。我的作品的表达方式可阐述为“Digital <∞ and Primitive >∞”。我自称为“数码自然艺术家”，并认为人类必须改变其原来的思维方式以便认识一种新的自然，因为它不是一种人类熟悉的实物，而是人类心灵科技虚拟的新空间。从技术层次上说，所展作品主题采用了各种三维动画和互动技术，数码感应和视频分流技术以及高级数码材料印制技术。原则上没有使用任何影像和生活图片，全部采用从点到线到面的电脑制作过程。艺术形式上主要集中在观念动画、动画装置、互动动画和数码印制。

就当代中国数码艺术而言，此展览也许能增添其探索的内涵和手段，区别影像与三维动画在当代数码艺术领域中的不同作用和发展潜力。北美当代理论家曾阐述过，从影像到三维动画是一种艰难的技术三级跳。当今发展用各种三维动画技术切入会更广泛而深入。在目前中国轻技术的当代艺术界，也许一些人容易了解其中的观念探索而难于鉴别技术层面的应用创新。但对年轻数码艺术家来讲，这对他们也许是一种最好的机会，使他们能担负起中国未来的艺术与技术同步发展的历史使命，特别是在当今这一强大的数码艺术时代。

从动画界角度说，我希望此展览能起到抛砖引玉的作用——从单纯的视频转往多向的动画形式发展。我非常慰藉地得知，北京大学和中国传媒大学都已接纳了学生采用装置和互动形式的动画创作。此展览的另一更重要作用是首次在中国把动画界和当代美术界人士聚集在一起，改变了过去各不相干、互不来往的局面。虽然此展聚集人士更侧重于动画界，但现代艺术界也有不少人士。经过融合和交流，双方更确切了解各自的发展和观念，从而增强当代美术界的技术含量和动画界的观念形式创新。

段：最后，请你谈一谈你个人想谈的问题，尤其是与你个人的数码艺术创作及教学相关的问题，以及这个展览的问题。

谭：是的，我非常幸运。在中国当代艺术的火热年代，得到中华世纪坛世界艺术馆和798缘分新媒体艺术中心的热情扶持。中华世纪坛提供了大厅第一层2700平方米的免费场地，同时也得到北京大学、中国传媒大学师生的大力相助和设备支持。开幕式的隆重与热闹，北京、上海各界媒体和朋友的捧场使我非常感动，这是在北美和其他西方国家办展难于达到的。所以回家的感觉真好。

更使我惊讶的是，除艺术家和知识阶层来参观我的作品外，国内农民旅游者成为我中国农业工具系列作品的最好演讲者和欣赏者。他们大声地、非常骄傲地向其他观众讲解这些农具的用途和使用方法，并非非常乐意地主动参与其中的互动动画的操作。

这是我曾未预料到的惊喜。

2009年3月，加拿大蒙特利尔、美国费城

art aimed at commerce, such as TV commercials, 3D stories, commercial games, industrial production and military virtual reality. On the other hand, there are pure digital art innovations without commercial purposes, emphasizing conceptual and new technology innovation and integration, and neglecting plot and popularity. I belong to the latter. However, in teaching digital art, I strongly propose, “walking with two legs.” Some parts of my syllabus were made strictly by industrial procedure. After all, most students of mine are working in the sector of industrial animation and only a very few of them will become lifetime practitioners of contemporary digital art.

The teaching outcomes in Beijing University and Communication University of China prove that my teaching philosophy and methods are practical; at least it provides more choices for students and schools.

Duan: Let's go back to your own art. Please talk about your current solo exhibitions. For instance, which aspects of your digital art are represented in the show? Which aspects in world digital art progress can be seen in the show? Which aspects represent the current Chinese digital art, and are displayed by your students' work? What inspiration do you hope this exhibition may bring to Chinese contemporary art field? And what influences do you think will be employed on digital art education by Chinese universities and colleges in the future?

Tan: The solo exhibitions held in the World Art Museum of the Beijing World Art Museum (China Millennium Monument) and the Yuanfen 798 New Media Art Space can be seen as a review exhibition of my digital art. All my works created during 2003 — 2008 were exhibited and those created during 1997 — 2002 were not included. The works exhibited are as below: rawhide prints and projection series, Burl+4 3D woodprints series, digital marble-print and animation installation and digital rusty metal-print and animation installation series. The more important works are agricultural implement series and digital bloodless series — the latter was newly created at Beijing University. The agricultural implement series are interactive animation installations which are represented by “Conceptual Weight” (large ancient scale), grindstone and winnower installation.

Digital-Primitive, the subject of this exhibition, has expanded on my concepts from 2002 — 2003. One way that I think about the relationship between primitive and modern technology can be symbolized as “Digital <∞ (Finite) and Primitive ∞ (Infinity).” I would suggest that any modern technology can be changed or replaced; however, the primitive systems of signification retain their significance. As the ideologies and technologies of society change, today's state-of-the-art technology will become tomorrow's primitive skills. I call myself a digital naturalist. “Digital-Nature” artwork should unite the human spirit, natural beauty, and digital-pretiness created through digital 3D simulation. Humans have to free their minds and spirit from what they are used to before they can use the complete capability of digital space to create and appreciate digital nature.

From the perspective of technique, the exhibited works embody various 3D animation and interactive technologies, video distributing technologies, and advanced digital printing on rigid material technology without any image and life photos but fully computer generated artwork.

As to Chinese digital art, this exhibition may help to enrich its connotation and means of research and to distinguish the functions and development potentials of video and 3D animation in contemporary art. Some

contemporary theorist in North America used to expound that the development from image to 3D animation was a difficult technological hop, skip and jump. This development will be more extensive and profound based on all kinds of 3D animation technologies. In contemporary Chinese art circles where technology is not taken seriously, it is possible that some artists find it easy to understand concept exploration but hard to identify technological application and innovation. However, this may be the best opportunity for young digital artists and may enable them to undertake the historical mission of promoting the synchronous development of art and technology of China in the future, especially in this era of powerful digital art.

I hope this exhibition may spur others to come forward with valuable contributions to the animation circles—to stimulate the development of pure video to multimedia and animation forms. To my great relief, Beijing University and Communication University of China have accepted interactive animation-installation into their core curriculums. Another important function of this exhibition is that it attracted people from both the animation circle and the contemporary art field, helping to change their previous situation of disconnect and non-intercourse in previous decades. Though this exhibition paid more attention to animators, it also attracted many contemporary artists. The two parties further know each other's conceptual development through fusion and communication, and contemporary artists have strengthened their technology while animators gain stronger conceptual innovation.

Duan: At last, please talk about some issues that you are interested in, especially related to your digital art creation and teaching, and something about this exhibition.

Tan: Indeed, I'm very lucky because I have been enthusiastically supported by the Beijing World Art Museum of the China Millennium Monument and the Yuanfen 798 New Media Art Space in this flourishing period of Chinese contemporary art. The former provided generous museum space with 2,700 square meters (around 44,300 sq. ft.) for me without any charges. And teachers and students in Beijing University and Communication University of China have given me vigorous assistance and equipment support. I am deeply touched by the solemnity and jollification of the opening ceremony as well as the attendance of all the media and friends from Beijing and Shanghai, which is difficult to achieve such success in North America and other western countries. So, it felt good to be in my homeland.

What is more amazing, besides artists and intellectuals, domestic farmer tourists became the best speakers and appreciators of my Chinese agricultural implement series. They loudly and very proudly explained the purposes and usages of these agricultural implement to other visitors, and were very willing to participate in operation of interactive animation-installation.

This was a pleasant surprise for me.

Montreal, Canada-Philadelphia, USA March, 2009