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KUNG FU MOTION

kungfumotion.live

ARTLAB EPFL
A KUNG FU MASTER IN A MOTION CAPTURE STUDIO
MAÎTRE KUNG-FU DANS UN STUDIO DE CAPTURE DE MOUVEMENT

B UNICORN DANCE
LA DANSE DE LA LICORNE

C TRADITIONAL CEREMONY IN FUJIAN
CÉRÉMONIE TRADITIONNELLE À FUJIAN

D DIGITAL RECONSTRUCTION OF LAM SAI WING
RECONSTRUCTION NUMÉRIQUE DE LAM SAI WING

E DEMONSTRATIONS BY HAKKA KUNG FU MASTERS
DÉMONSTRATIONS DES MAÎTRES DU KUNG-FU HAKKA

F HAKKA KUNG FU DOCUMENTARY
FILM DOCUMENTAIRE SUR LE KUNG-FU HAKKA

G INTERACTIVE INSTALLATION OF HAKKA KUNG FU WEAPONS AND THEIR DEMONSTRATION
INSTALLATION INTERACTIVE PRÉSENTANT DES ARMES DE KUNG-FU HAKKA
ET LEURS modes D’UTILISATION

H KUNG FU MASTERS IN HONG KONG’S URBAN AND RURAL SETTINGS
MAÎTRES KUNG-FU DANS LES MILIEUX URBAINS ET RURAUX DE HONG KONG

I MASTER IP CHI KEUNG’S STUDIO
LE STUDIO DU MAÎTRE IP CHI KEUNG

J SLOW-MOTION VIDEO RECORDINGS OF HAKKA MASTERS
CAPTATIONS VIDÉO EN SLOW-MOTION DES MAÎTRES HAKKAS

K ORIGINAL KUNG FU FILM POSTERS FROM GHANA
AFFICHES ORIGINALES DU GHANA, PROMOUVANT DES FILMS DE KUNG-FU
L  EXCERPTS FROM FAMOUS HONG KONG KUNG FU MOVIES
EXTRAITS DE FILMS CÉLÈBRES DE KUNG-FU, PRODUITS À HONG KONG

M  DOCUMENTARY CONCERNING THE FIRST SHAOLIN TEMPLE IN AFRICA
DOCUMENTAIRE SUR LE PREMIER TEMPLE SHAOLIN EN AFRIQUE

N  DEVELOPMENT OF KUNG FU AS A SPORT
DÉVELOPPEMENT DU KUNG-FU EN TANT QUE SPORT

O  MULTI-VIEW KUNG FU DEMONSTRATION BY OSCAR LAM
DÉMONSTRATION MULTI-ANGLE DE KUNG-FU PAR OSCAR LAM

P  DIGITAL VISUALIZATION OF MOTION CAPTURE DATA SETS
VISUALISATION NUMÉRIQUE DES DONNÉES ISSUES DE LA CAPTURE DE MOUVEMENT

Q  KUNG FU MASTERS IN A MOTION CAPTURE STUDIO
MAÎTRES KUNG-FU DANS UN STUDIO DE CAPTURE DE MOUVEMENT

R  INTERACTIVE INSTALLATION KUNG FU ANALYTICS (RE-ACTOR)
INSTALLATION INTERACTIVE D’ANALYSE DES DONNÉES DE KUNG-FU (RE-ACTOR)

S  POSE MATCHING GAME
JEU DE «POSE-MATCHING»

T  DRONE VIDEO OF A JIAO FESTIVAL
CAPTATION VIDÉO PAR DRONE DU FESTIVAL JIAO

U  INTERACTIVE PANORAMIC VIDEO OF A JIAO FESTIVAL
VIDÉO INTERACTIVE PANORAMIQUE DU FESTIVAL JIAO

V  JIAO FESTIVAL VIDEO TRIPTYCH
TRIPTYQUE VIDÉO DU FESTIVAL JIAO

W  3D CONVERSION OF THE 3RD CHAMBER OF SHAOLIN
CONVERSION 3D DE LA 3ÈME CHAMBRE DE SHAOLIN
Kung Fu Motion examines strategies for encoding, retrieving and re-enacting intangible heritage in ways that allow these archives to be “alive” in the present. The exhibition brings together historical materials with creative visualizations derived from advanced documentation processes including motion capture, motion-over-time analytics, 3D reconstruction, and panoramic video. Exposing the potential of experimental museology to revivify cultural heritage, these archival materials are re-interpreted and re-performed through the mediums of augmented and virtual reality and interactive media art. This “living archive” utilizes new immersive and interactive display paradigms to perpetuate the performances of past Masters for future generations.

Kung Fu Motion derives from a longitudinal research project, the Hong Kong Martial Arts Living Archive (instigated in 2012). This ongoing research is a collaboration between the International Guoshu Association, City University of Hong Kong, and the Laboratory for Experimental Museology (eM+), Digital Humanities Institute, EPFL.
LES ARCHIVES VIVANTES

*Kung Fu Motion* examine les stratégies permettant d’en-coder, de récupérer et de reproduire le patrimoine immatériel de manière à permettre à ces archives d’être “vivantes” dans le présent. Cette exposition rassemble du matériel historique et des visualisations créatives dérivées de techniques avancées de documentation comprenant la capture de mouvements motion capture, l’analyse de l’évolution du mouvement dans le temps, la reconstruction en 3D et la vidéo panoramique. En mettant en évidence le potentiel de la muséologie expérimentale pour revivifier le patrimoine culturel, ces matériaux d’archives sont réinterprétés et ré-exécutés au moyen de la réalité virtuelle et augmentée, et l’art des médias interactifs. Ces «archives vivantes» utilisent de nouveaux paradigmes d’affichage interactif et immersif pour perpétuer les prestations des Maîtres du passé pour les générations futures.

*Kung Fu Motion* découle d’un projet de recherche longitudinal, les *Archives vivantes des arts martiaux de Hong Kong*, «*Hong Kong Martial Arts Living Archive*» (initié en 2012). Cette recherche en cours est une collaboration entre la International Guoshu Association, City University of Hong Kong, et le Laboratoire de muséologie expérimentale (eM+), Institut des Humanités Digitales, EPFL.
Intangible cultural expressions are defined by their reliance on embodied knowledge. The UNESCO Convention for the Safeguarding of the Intangible Heritage (2003) was conceived to help preserve these social practices, oral traditions and performances, which are increasingly at risk worldwide.

In Mainland China, a significant portion of traditional martial arts have already vanished. Hong Kong remains a critical center for Southern Chinese kung fu and is home to some of the most prominent martial artists in the world. However, rapid urban development, population growth, cultural transformation, and the aging of the masters are endangering these practices.

The documentation, reproduction and presentation of immaterial cultural forms pose significant theoretical and technological challenges. Ephemeral traditions require cultural scholars, technologists, artists and scientists to work together with kung fu communities to develop new methods for sustaining and enlivening these cultural traditions. This interdisciplinary endeavor has become an ongoing focus for the Digital Humanities Institute, EPFL, in conjunction with collaborators and kung fu practitioners around the world.
HÉRITAGE EN PÉRIL

Les expressions culturelles immatérielles reposent sur les connaissances incorporées. La *Convention pour la sauvegarde du patrimoine immatériel* de l’UNESCO (2003) a été conçue pour aider à la préservation de ces pratiques sociales, représentations et traditions orales, qui sont de plus en plus menacées à travers le monde.

En Chine continentale, une part importante des arts martiaux traditionnels a déjà disparu. Hong Kong demeure un centre vital du kung-fu de la Chine du Sud, et compte des experts en arts martiaux parmi les plus réputés au monde. Cependant, l’urbanisation rapide, la croissance de la population, la transformation culturelle et le vieillissement des maîtres mettent ces pratiques en péril.

La documentation, la reproduction et la présentation des formes culturelles immatérielles posent d’importants défis théoriques et technologiques. Les traditions éphémères nécessitent que des spécialistes des questions culturelles, des technologues, des artistes et des scientifiques travaillent avec les communautés du kung-fu pour développer de nouvelles méthodes pour maintenir et faire vivre ces traditions culturelles. Cette entreprise interdisciplinaire est devenue une priorité constante pour l’Institut des Humanités Digitales, EPFL, conjointement avec des collaborateurs et personnes pratiquant le kung-fu dans le monde.
KUNG FU IN CHINA AND HONG KONG

China is home to one of the oldest and most well known martial arts in the world. Popularly known as “kung fu”, Chinese martial arts are not a single, homogeneous system but a pluralistic tradition with diverse regional varieties. One of them – the system of Southern Chinese martial arts – had its foci in the Zhejiang and Fujian provinces during the Ming dynasty (1368–1644).

The center of Southern Chinese martial arts gradually shifted south during the late imperial and modern periods (mid-17th century – mid-20th century), spreading from southern Fujian to Taiwan, Guangdong, Guangxi, Sichuan, and overseas to Southeast Asia and Okinawa. Southern Chinese martial arts also began to gain influence in Hong Kong following migrations of the Hakka, a fierce diasporic people who started to move out of the mountains of southern Fujian and eastern Guangdong from Emperor Kangxi’s reign (1661–1722) onwards.

As Hong Kong grew in economic significance during the mid-19th century, it attracted significant numbers of martial artists from the mainland and became a melting pot for kung fu culture. In the 1950s, as the “iron curtain” fell on China, Hong Kong and Taiwan became the de facto centers of kung fu. Coupled with the rising international exposure of kung fu representations in popular film, Hong Kong became the birthplace of modern kung fu culture.

LE KUNG-FU EN CHINE ET À HONG KONG

La Chine est le foyer de l’un des arts martiaux les plus anciens et les plus connus au monde. Communément appelés « kung-fu », les arts martiaux chinois ne sont pas un système unique et homogène, mais une tradition pluraliste aux variétés régionales diverses. L’un d’entre eux, le système d’arts martiaux de la Chine du Sud, avait son foyer dans les provinces du Zhejiang et du Fujian durant la dynastie Ming (1368–1644).


Hong Kong, gagnant en importance économique durant le milieu du XIXe siècle, attira un nombre important d’experts en arts martiaux du continent et devint un creuset de la culture du kung-fu. Dans les années 1950, le « rideau de fer » tombant sur la Chine, Hong Kong et Taiwan devinrent de fait des centres du kung-fu. Se combinant avec une visibilité croissante sur la scène internationale des représentations du kung-fu dans les films populaires, Hong Kong devint le berceau de la culture du kung-fu moderne.
Migrations of the Hakka and Hoklo groups, the latter being Hokkien-speaking people who moved from Fujian to Guangdong.

Migrations des groupes Hakka et Hoklo, ce dernier étant des locuteurs du hokkien qui se déplacèrent du Fujian au Guangdong.
Migrations des groupes Hakka et Hoklo, ce dernier étant des locuteurs du hokkien qui se déplacèrent du Fujian au Guangdong.
In contrast to most parts of China today, in the rural villages in southern Fujian, martial arts practice is still very much alive. The survival of traditional martial arts here is due to a fortuitous combination of geographic marginality and general economic well-being. These circumstances have allowed the area’s kung fu traditions and culture to withstand the test of time by avoiding the eroding impact of contemporary cultural transformations in other parts of China. Village martial arts in the Zhangzhou prefecture of the Fujian province provide a unique insight into the original context of Southern Chinese martial arts, and an opportunity to study archaic forms of weapons based and empty-hand practices.

LES TRADITIONS DU FUJIAN AUJOURD'HUI

Contrairement à la plupart des régions de Chine aujourd'hui, dans les villages ruraux au sud du Fujian, la pratique des arts martiaux est encore bien vivante. La survie des arts martiaux traditionnels y est due à la combinaison fortuite d’une marginalité géographique et d’un bien-être économique général. Ces circonstances ont permis aux traditions du kung-fu et à la culture de la région de résister à l’épreuve du temps en évitant l’impact des transformations culturelles contemporaines dans les autres régions de Chine. Les arts martiaux villageois dans la préfecture de Zhangzhou, dans la province du Fujian, offrent un aperçu unique du contexte d’origine des arts martiaux de la Chine du Sud, ainsi qu’une opportunité d’étudier les formes archaïques des pratiques avec armes et à mains nues.
KUNG FU IN HONG KONG

Hong Kong has been a nexus of migrants from China for the past 100 years including Hakka kung fu traditions and the pioneering fight choreographers of Hung Kuen.

LE KUNG-FU À HONG KONG

Hong Kong a été un carrefour de migrants de Chine depuis les 100 dernières années, incluant les traditions du kung-fu hakka et les chorégraphes pionniers de combats de Hung Kuen.
During the Republican era (1911–49), several important masters moved to Hong Kong from Guangzhou and Foshan, bringing with them new styles and methods of training. Chief among these migrating masters was Lam Sai Wing, a pre-eminent martial arts thinker and reformer in Southern China. These masters made their homes in Hong Kong’s old commercial districts of Sheung Wan, Central, and Yau Ma Tei, and laid the foundation for the city’s urban kung fu tradition.

Meanwhile, in rural New Territories, village martial artists from Mainland China began to proliferate, reaching their migratory peak in the 1950s as they fled from an increasingly oppressive regime. The most influential migrants were Hakka masters, who joined the existing Hakka community and considerably enriched Hong Kong’s rural traditions. Hakka masters also brought about an unprecedented level of interaction between Hong Kong’s urban and rural kung fu traditions.

The Hakka originally came from northern China and migrated to the south through several waves of migration over the past millennium, particularly after the Southern Song dynasty (1127–1279). During the Ming and Qing dynasties southern China was infested by social violence. The popularity of martial arts among the Hakka was, therefore, due largely to the need for survival in this chaotic and violent milieu. After over three hundred years of development, Hakka kung fu became one of the most distinctive and important martial art systems in Southern China.

KUNG-FU RURAL ET URBAIN À HONG KONG

Durant l’ère républicaine (1911–49), plusieurs maîtres importants arrivèrent à Hong Kong de Guangzhou et de Foshan, emportant avec eux de nouveaux styles et méthodes d’entraînement. Au premier rang parmi ces maîtres migrants, était Lam Sai Wing, un penseur et un réformateur des arts martiaux prééminent en Chine du Sud. Ces maîtres s’installèrent dans les vieux quartiers commerciaux de Sheung Wan, Central et Yau Ma Tei à Hong Kong, et posèrent les bases de la tradition du kung-fu urbain de la ville.

Entre-temps, dans les Nouveaux Territoires ruraux, les experts en arts martiaux des villages de Chine continentale commencèrent à se multiplier, atteignant leur pic migratoire dans les années 1950 alors qu’ils fuyaient un régime d’oppression croissant. Les migrants les plus influents étaient les maîtres Hakka, qui rejoignirent la communauté Hakka existante et enrichirent considérablement les traditions rurales de Hong Kong. Les maîtres Hakka engendrèrent également un niveau sans précédent d’interaction entre les traditions du kung-fu rural et urbain.

Les Hakka, venus initialement du nord de la Chine migrèrent au sud par plusieurs vagues de migration au cours du dernier millénaire, et particulièrement après la dynastie Song du Sud (1127–1279). Durant les dynasties Ming et Qing le sud de la Chine était ravagé par la violence sociale. La popularité des arts martiaux parmi les Hakka était donc largement due au besoin de survie dans ce milieu violent et chaotique. Après plus de trois cents ans d’évolution, le kung-fu hakka est devenu l’un des systèmes les plus caractéristiques et importants en Chine du Sud.
LAM SAI WING AND HUNG KUEN

Lam Sai Wing (1860–1943) was born in a martial art family from Ping Chau, Nam Hoi (Nanhai) prefecture, in Guangdong province. Lam followed Master Wong Fei Hung for over twenty years and then set up his own martial art school in Guangzhou at the age of forty-five, becoming one of the most important martial artists in Guangdong in the early 20th century. In the late 1920s, Lam and his family moved to Hong Kong, bringing with them important new martial art concepts. In particular, the Nam Mou Athletic Association he set up gathered an outstanding group of southern and northern martial art masters, which lay the foundation for modern “Guoshu” development in Hong Kong.

Hung Kuen was a pre-eminent kung fu style in Guangdong in the early 20th century and its patriarch Lam Sai Wing led the movement to modernize and popularize Chinese martial arts in Southern China. Three generations of Lam family masters – Lam Sai Wing, Lam Cho (1910–2012), and Lam Chun Fai (1940–) – have played a pivotal role in kung fu development in Hong Kong community. From the 1960s, as their students migrated overseas, Hung Kuen became internationally renowned and is now one of the most popular kung fu styles around the world.

LAM SAI WING ET LE HUNG KUEN

Lam Sai Wing (1860–1943) est né d’une famille adepte d’arts martiaux de Ping Chau, préfecture de Nam Hoi (Nanhai), province du Guangdong. Lam suivit le maître Wong Fei Hung durant plus de vingt ans pour ensuite fonder sa propre école d’art martial à Guangzhou à l’âge de quarante-cinq ans, devenant l’un des plus importants experts en art martial au Guangdong au début du XXe siècle. À la fin des années 1920, Lam et sa famille arrivèrent à Hong Kong emportant avec eux d’importants et nouveaux concepts des arts martiaux. En particulier la Nam Mou Athletic Association, qu’il fonda et qui rassemblait un groupe exceptionnel de maîtres d’arts martiaux du sud et du nord, posant les bases pour le développement du Guoshu moderne à Hong Kong.

Le Hung Kuen était un style de kung-fu prépondérant au Guangdong au début du XXe siècle et son patriarche Lam Sai Wing mena le mouvement de modernisation et de popularisation des arts martiaux chinois en Chine du Sud. Trois générations de maîtres de la famille Lam, Lam Sai Wing, Lam Cho (1910–2012) et Lam Chun Fai (1940–), jouèrent un rôle central dans le développement du kung-fu dans la communauté de Hong Kong. Depuis les années 1960, avec la migration à l’étranger de leurs étudiants, le Hung Kuen devint internationalement reconnu et est maintenant l’un des styles de kung-fu les plus populaires dans le monde.
In Southern China where local militarization had been gathering pace since the Ming dynasty, martial arts developed as a means of survival for the Hakka. Their kung fu system came to symbolize their fierce independence. The Hakka used their everyday environments as opportunities for training and developing fighting techniques derived from their work and daily activities. State prohibition on private arms meant that civilian martial artists had to repurpose everyday tools as weapons, such as the common *daam tiu* (used for carrying loads) and the hoe, as well as other farming and hunting tools.

The most common weapons in Hakka martial arts include the staff, long pole, double knives, rattan shield and sword, iron rulers, *pa* (trident), *cha* (pitch fork), *dadao* (longhafted sword) and, sometimes, the *dandao* (sabre).

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**LES ARMES HAKKAS**

En Chine du Sud, où la militarisation locale s’accélérait depuis la dynastie Ming, les arts martiaux devinrent un moyen de survie pour les Hakkas. Leur style en vint à symboliser leur indépendance farouche. Les Hakkas utilisèrent leurs environnements quotidiens comme des opportunités d’entraînement et de développement de techniques de combat dérivées de leur travail et de leurs activités journalières. Avec l’interdiction par l’État des armes privées, les experts en arts martiaux civils devaient transformer les outils de tous les jours en armes tels le *daam tiu* commun (utilisé pour porter des charges) et la houe, tout comme d’autres outils agricoles et de chasse.

Les armes les plus courantes dans les arts martiaux hakkas comprennent le bâton, la longue perche, les doubles couteaux, le bouclier en rotin et l’épée, la règle en fer, le *pa* (le trident), le *cha* (la fourche), le *dadao* (l’épée au long manche) et, quelquefois, le *dandao* (le sabre).
THE 36TH CHAMBER OF SHAOLIN
CINEMA AND GLOBALIZATION

Hong Kong is the birthplace and capital of kung fu cinema. The interaction between kung fu as community practice and as cinematic genre has played a key role in exporting an iconic element of transnational Chinese identity and fostering a global fascination with Chinese martial arts.

LE CINÉMA ET LA MONDIALISATION

Hong Kong est le berceau et la capitale du cinéma de kung-fu. L’interaction entre le kung-fu en tant que pratique communautaire et en tant que genre cinématographique a joué un rôle clé dans l’exportation d’un élément emblématique de l’identité chinoise transnationale et dans la fascination planétaire pour les arts martiaux chinois.
The globalization of Chinese martial arts was fueled by the explosion of kung fu cinema in Hong Kong after the 1950s, with the “golden age” of kung fu cinema beginning in the late 1970s. While this unique form of cinema was originally geared towards the Chinese audience, it quickly took on an international dimension, and became an iconic expression of Chinese culture. This global development that began as an extension of kung fu cinema was more of a pop culture than a sport, and for most kung fu practitioners the real and the fictive worlds of Chinese martial arts remain conjoined.

Interactions between traditional kung fu practice and these cinematic representations began with Lingnan Hung Kuen. Lau Zaam, one of Lam Sai Wing’s students, was the first actor to be cast in his master’s role, thus bringing something of the “real kung fu” into the world of make-believe. Building on his legacy, Lau Zaam’s son, the legendary kung fu actor, choreographer and director Lau Kar Leung took Hong Kong kung fu cinema to new heights in the 1970s and 1980s.

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LE CINÉMA DE KUNG-FU DE HONG KONG

La mondialisation des arts martiaux chinois a été alimentée par l’explosion du cinéma de kung-fu à Hong Kong après les années 1950, « l’âge d’or » du cinéma de kung-fu démarrant à la fin des années 1970. Alors que cette forme unique de cinéma était à l’origine destinée au public chinois, elle prit rapidement une dimension internationale et devint une expression emblématique de la culture chinoise. Ce développement planétaire, qui débuta comme une extension du cinéma de kung-fu, était davantage une culture pop qu’un sport, et pour la plupart des pratiquants de kung-fu les mondes réel et fictif des arts martiaux chinois restaient conjoints.


LE STUDIO DE LA SHAW BROTHERS

PEU APRES SA CREATION EN 1958, LE STUDIO DE LA SHAW BROTHERS DEVINT LE PLUS GRAND STUDIO PRIVE AU MONDE: MOVIE TOWN. AU FIL DES ANNEES, LA SOCIETE CINEMATOGRAPHIQUE PRODUISIT QUELQUE 1000 FILMS ET REUSSIT TOUT PARTICULIEREMENT A POPULARISER LE GENRE KUNG-FU.

CHALLENGE OF THE MASTERS (1976)

MARTIAL CLUB (1981)

THE 36TH CHAMBER OF SHAOLIN (1978)

THE EIGHT DIAGRAM POLE FIGHTER (1983)
Lau Kar Leung was a Hung Kuen master as well as actor, filmmaker and fight choreographer. He is best known for the films he made in the 1970s and 1980s for the Shaw Brothers’ studio. Among his most famous works are *The 36th Chamber of Shaolin* starring Gordon Liu, and *Drunken Master II* with Jackie Chan. Following the footsteps of his father, Lau Kar Leung brought “real kung fu” to cinema, and may be credited for popularizing traditional Chinese martial arts – especially Hung Kuen – around the world. He created a new cinematic language founded on his profound knowledge of traditional martial arts, an influence that continues to be felt in the movies today.

Gordon Liu became one of the most important representatives of Lau Family Hung Kuen via his hugely successful acting career. In the late 1970s and early 1980s, Gordon Liu was arguably the top kung fu star at the Shaw Brothers’ studio, rivaling Jackie Chan in name and popularity. Together with Alexander Fu Sheng, he featured in many of Lau Kar Leung’s classic films. He was best known for his role as the monk Sande in *The 36th Chamber of Shaolin*, which propelled him to cult fame in kung fu cinema. His roles in Quentin Tarantino’s *Kill Bill* series (2003–2004) revived his film career.

GOLDEN AGE OF PAINTED FILM POSTERS IN GHANA

In the mid-1980s, a mobile cinema tradition was born and world cinema was brought to the back roads and byways of Ghana carried around by local showmen. Kung fu classics made their way from village to village on video cassettes, played on a 20-inch TV monitor and powered by a portable generator. As a consequence, from ~1985 until 2000 a unique “golden age” of hand-painted kung fu movie posters appeared in Ghana - unique visual narratives that were created solely for the local movie viewing audience. These eye-catching posters, announcing the arrival of a movie in the villages, were painted on cotton canvas, often utilizing recycled, locally woven 50 kg flour sacks.

L’ÂGE D’OR DES AFFICHES DE FILMS PEINTES DU GHANA

The nationalization and sportization of Chinese martial arts was well under way after the establishment of the Central Guoshu Institute (1928). Created in the 1920s, Guoshu was born of a complex process of interaction between traditional Chinese martial arts and western sports.

Political interruptions and ideological conflict in the 1950s brought the national effort to modernize and develop Chinese martial arts into a modern Chinese sports and physical education system – the Guoshu Movement – to a halt, and Chinese martial arts did not again appear on the international stage till after the Cultural Revolution (1966–76). By then they took on a very different form, as modern wushu, modelled on Soviet-style gymnastics, is almost entirely divorced from the values and principles of traditional Chinese martial arts.

Guoshu is a comprehensive Chinese sport and physical education system with empty-hand and armed martial arts adversarial competition at its core, encompassing sanshou (empty-hand martial arts / Chinese kickboxing), duanbing (fencing with short-range weapons), changbing (fencing with long-range weapons), shuaijiao (Chinese wrestling) and taolu (performance of martial art routines). For decades, Guoshu fell into abeyance, but over the past twenty years, following a general renaissance of Chinese culture, Guoshu has arisen from the ashes and is once again held up as a viable new model for the future of Chinese martial arts.

LES ARTS MARTIAUX CHINOIS EN TANT QUE SPORTS MODERNES


Le Guoshu est un système de sports chinois et d’éducation physique complet avec en son centre la concurrence entre les arts martiaux avec armes et à mains nues, comprenant le sanshou (arts martiaux à mains nues / kick-boxing chinois), le duanbing (escrime avec armes à courte portée), le changbing (escrime avec armes à longue portée), le shuaijiao (la lutte chinoise) et le taolu (exécution d’enchaînements d’arts martiaux). Durant des décennies, le guoshu tomba en désuétude, mais ces vingt dernières années, suite à une renaissance générale de la culture chinoise, le guoshu renait de ses cendres et est à nouveau présenté comme un modèle viable pour le futur des arts martiaux chinois.
FUTURE ARCHIVE

Charting the shifts in documentation and notation from hand-drawn illustrations to the forefront of digital motion capture and motion analytics, the archive of the future combines advanced digital techniques with experimental museology.

LES ARCHIVES FUTURES

Retraçant, en documentation et notation, le passage des illustrations dessinées à la main à la pointe de la capture de mouvement numérique et de l’analyse du mouvement, les archives du futur combineront les technologies numériques de pointe et la muséologie expérimentale.
While martial arts have a long literary tradition in China, the focus of the early texts tend to be on weapons and armed fighting traditions. The earliest extant Chinese boxing manual is the *Quanjing (Boxing Treatise)*, written by General Qi Jiguang in the 16th century. It contains 32 empty-hand techniques described in detail with accompanying hand-drawn illustrations.

Most of the Chinese Boxing manuals were written during the Qing (hand-written manuscripts) and the Republic of China (published in print). The Qing manuals mainly follow *Boxing Treatise*’s format, while during the Republic of China authors started to develop systematic notation systems. By varying the style in which the lines are drawn – straight or curved, solid or dotted – they developed a simple but effective strategy to annotate complex martial art movements.
順擊肘靠身打滾
快他難遮攔醉外線
刷同捋肚搭一跌誰
敢爭前
旗鼓勢左右壓進近
他手橫劈雙行殺靠
跌人人識得虎抱頭
要躲無門
習法
見仇出剣
一
向左防賊
二
向右防賊
三
持剣對賊
四
Lam Sai Wing (1860–1943) was a traditional kung fu master and an innovator of the art form. In response to technologies imported from the West and new notational systems that were being developed during the Republican era, Lam Sai Wing and his students were the first to systematically use photography in martial arts notation for southern Chinese martial arts. Lam personally took part in studio shoots which led to a series of manuals on Lingnan Hung Kuen’s three pillar forms, *Taming the Tiger Boxing*, *Tiger and Crane Boxing*, and *Iron Wire Boxing*. Currently the Living Archive of Hong Kong Kung Fu is making extensive photographic documentation.
CINEMATOGRAPHY

Cinematographic documentations of Chinese martial arts date to the Republic of China (1911–1949), but they are very rare and were mainly made by overseas observers. Cinematographic methods did not start to gain currency until the mid-20th century, when Hong Kong filmmakers started to turn to Chinese martial arts as an important subject and inspiration for film. Systematic use of videography by kung fu associations and community practitioners followed somewhat later, particularly as the domestic video camera started to become more widely available in the 1970s.

CINÉMATOGRAPHIE

Les documentations cinématographiques des arts martiaux chinois datent de la période de la République de Chine (1911–1949), mais elles sont très rares et ont été réalisées principalement par des observateurs étrangers. Les méthodes cinématographiques n’ont commencé à gagner en popularité qu’au milieu du XXe siècle, lorsque les cinéastes de Hong Kong ont commencé à se tourner vers les arts martiaux chinois comme un sujet important et une source d’inspiration pour le cinéma. L’utilisation systématique de la vidéographie par les associations de kung-fu et les pratiquants de la société a suivi un peu plus tard, d’autant plus que l’appareil vidéo familial a commencé à devenir plus largement disponible dans les années 1970.
Recent major advancements in digital documentation strategies include laser scanning, stereographic photography, photogrammetry, and motion capture. Cinematography and videography continue to evolve, enabling for example gigapixel resolution, high dynamic range, depth mapping and extreme slow motion. Meanwhile, new camera lens designs enable 360-degree panoramic and 720-degree spherical imaging, while the multiplication of cameras and drone mounts provides remarkable expansion of the field of view.
AVÈNEMENT DE LA TECHNOLOGIE NUMÉRIQUE

Les avancées majeures récentes dans les stratégies de documentation numérique comprennent la digitalisation laser, la photographie stéréographique, la photogrammétrie et la capture de mouvement. La cinématographie et la vidéographie continuent d'évoluer, permettant par exemple une haute définition gigapixel, une gamme de dynamique élevée, une cartographie de profondeur et un ralenti extrême. Pendant ce temps, de nouvelles conceptions d’objectifs de caméra permettent une vision panoramique à 360 degrés et une imagerie sphérique à 720 degrés, tandis que la multiplication des caméras et des montures sur drones offre un élargissement remarquable du champ de vision.
VIRTUAL RECONSTRUCTION AND REENACTMENT

Hollywood and the game industry have perfected the manufacture of 3D human avatars, while animation brings these replicates to convincing life. This technique has been applied to re-create a performance of *Iron Wire Boxing* by Lam Sai Wing. The late master’s facial and bodily features were digitally reconstructed with reference to vintage photographic portraits, and his martial arts movements were simulated with data extracted from demonstrations performed by his descendant, Master Oscar Lam. The result is both a cultural reclamation and reinstatement of an invaluable teaching and learning tool for current and future generations of kung fu practitioners.

RECONSTRUCTION VIRTUELLE ET REPRÉSENTATION

Hollywood et l’industrie du jeu ont perfectionné la fabrication d’avatars humains 3D, tandis que l’animation donne vie à ces répliques de manière convaincante. Cette technique a été appliquée pour recréer une démonstration de *la boxe du fil de fer* par Lam Sai Wing. Les caractéristiques du visage et du corps du défunt maître ont été reconstruites numériquement en référence aux portraits photographiques d’époque, et ses mouvements d’arts martiaux ont été simulés avec des données extraites des démonstrations effectuées par son descendant, Maître Oscar Lam. Le résultat est à la fois une réappropriation culturelle et le rétablissement d’un outil d’enseignement et d’apprentissage inestimable pour les générations actuelles et futures de pratiquants du kung-fu.
INTERACTIVE ANALYTICS

Augmentation techniques digitally annotate motion capture with visualizations that enhance their communicative potential and represent new aesthetic and scientific analyses of embodied movement in space and time. Motion capture provides the basis upon which to build a continuous topological model, allowing for engagement with the affective quality of the movement and a contemporary counterpoint to traditional notation methods.

ANALYSES INTERACTIVES

Les techniques d’augmentation annotent numériquement la capture de mouvement avec des visualisations qui améliorent leur potentiel communicatif et représentent de nouvelles analyses esthétiques et scientifiques des mouvements incorporés dans l’espace et le temps. La capture de mouvement offre la base sur laquelle construire un modèle topologique continu, permettant un engagement avec la qualité affective du mouvement et un contrepoint contemporain aux méthodes de notation traditionnelles.
Motion capture is the process of recording the movement of objects or people. In film-making and video game development, it refers to recording the movements of human actors in order to animate digital character models for 2D or 3D computer animation. Motion capture is a ‘prosthetic’ technology that uses numerous infrared cameras to track reflective markers attached to the performer’s body so that in post-production a digital facsimile of that person’s embodied performance can be re-constructed.

The Hong Kong Martial Arts Living Archive currently contains 19 styles by 33 elite practitioners, and is comprised of 130 motion capture datasets recorded from empty-hand and weapons-based sequences. These are taolu, pre-arranged movement sequences used for learning, practicing and performing traditional martial arts, and were initially created as mnemonic aids for students.

Importantly, taolu are considered the primary “text” for Chinese martial arts, whereby learning consists of memorizing the “text” through imitation and repetition. For the first time in history, motion capture has allowed the precise recording of these taolu, forming the largest motion-data archive of its kind in the world.
Dance performances of auspicious and mythical creatures such as the dragon, lion, unicorn and piqiu, as well as martial arts performances are ubiquitous in traditional festivals in southern China. These performances are both entertainment and a fundamental part of communal rituals to appease the gods and ward off evil spirits. In Hong Kong such festivals are one of the last cultural bastions providing a vital platform for village martial artists.

A unique festival in coastal southern China is the Taiping Qingjiao Festival, or “Jiao Festival” in English. The origin of Jiao was an invocation of blessing after a village had a plague. They were therefore occasions for communal cleansing which typically consisted of feasts, ritual dedications to the gods, and elaborate celebrations involving traditional opera, lion or unicorn dance and martial arts performances. After the initial Jiao Festival, these celebrations would be held at regular intervals, usually every ten years, to renew the blessing and avert disaster. This Jiao Festival was held in 2018 in Lam Chuen in Tai Po district in Hong Kong.
LE SPECTACLE D'ARTS MARTIAUX DANS LE FESTIVAL DE JIAO

Les spectacles de danse de créatures augustes et mythiques tels que le dragon, le lion, la licorne et le píqiu, ainsi que les démonstrations d’arts martiaux sont omniprésents dans les festivals traditionnels du sud de la Chine. Ces spectacles sont à la fois un divertissement et un rituel communal pour apaiser les dieux et éviter les mauvais esprits. A Hong Kong, ces festivals représentent l’un des derniers bastions culturels offrant une plate-forme vitale pour les experts en arts martiaux villageois.

Le Festival de Taiping Qingjiao, ou « Jiao Festival » en anglais, est unique dans la région côtière du sud de la Chine. L’origine de Jiao était une invocation de la bénédiction d’un village après une épidémie de peste. C’était donc l’occasion pour une purification communale qui comportait typiquement les banquets, les dédicaces rituelles aux dieux, et les célébrations élaborées impliquant des spectacles traditionnels d’opéra, de lion ou de licorne et d’arts martiaux. Après le premier festival Jiao, ces célébrations se tenaient à intervalles réguliers, habituellement tous les dix ans, pour renouveler la bénédiction et éviter les catastrophes. Ce festival Jiao a eu lieu en 2018 à Lam Chuen dans le district de Tai Po à Hong Kong.
Contemporary modes of display such as interactive and immersive virtual and augmented reality platforms provide unique potential for the interpretation of digital datasets in museological contexts. The installations deployed in *Kung Fu Motion* use apparatus that stimulate engagement with the embodied knowledge of kung fu.

*Kung Fu Motion* is an operational and aesthetic strategy that sets out to overcome the relegation of vital cultural practices to a position of “past-ness” — a typical approach in ethnographic displays. By providing the circumstances for embodied knowledge transmission through platforms that return codified knowledge to the body of the visitor, the exhibition creates a space in which digital strategies can help to sustain intangible heritage despite the difficulties associated with documenting the ephemeral, codifying the tacit, and mediating the embodied.

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Les modes contemporains de visualisation tels que les plateformes de réalité virtuelle et de réalité augmentée interactives et immersives, offrent un potentiel unique pour l’interprétation des ensembles de données numériques dans des contextes muséologiques. Les installations déployées dans *Kung Fu Motion* utilisent des appareils qui stimulent l’engagement avec les connaissances incorporées du kung-fu.

*Kung Fu Motion* représente une stratégie opérationnelle et esthétique qui vise à surmonter la relégation de pratiques culturelles vitales à une position « du passé » — une approche typique dans les présentations ethnographiques. En fournissant les conditions de la transmission des connaissances incorporées à travers des plateformes qui restituent au corps du visiteur des connaissances codifiées, l’exposition crée un espace dans lequel les stratégies numériques peuvent contribuer au maintien du patrimoine immatériel malgré les difficultés de documenter l’éphémère, de codifier le non-dit, et médiatiser l’incarné.
THE DIGITAL HUMANITIES AT EPFL

As data proliferate and play an ever-growing role in our life decisions, the division between engineers who design algorithms and social science experts who interpret those data cannot hold anymore. The Digital Humanities at EPFL bridge digital tools and techniques with traditional humanities questions and modes of inquiry. Further, they enable research at completely new orders of magnitude and scale, and empower the formulation of new forms of social, cultural, and humanistic reasoning as well as the development of novel computational methods and algorithms. The Digital Humanities Institute within the College of Humanities consists of four labs (Digital Humanities, Experimental Museology, Digital and Cognitive Musicology, and Social Media) and offers educational programs at both Master and PhD levels.

For more information, visit: https://cdh.epfl.ch/dh

THE LABORATORY FOR EXPERIMENTAL MUSEOLOGY

*Kung Fu Motion* is a project of EPFL’s new Laboratory for Experimental Museology+ (eM+), a new transdisciplinary initiative at the intersection of immersive visualization technologies, visual analytics, aesthetics and cultural data. eM+ has eight unique visualization systems combined with powerful sonic architectures, benchmarks in the realms of virtual, augmented, mixed realities. These cluster-based 3D systems have been deployed in major exhibitions and installations throughout the world. eM+ works on tangible and intangible heritage and archival materials from many regions including Asia, Australasia and Europe. It also creates high-fidelity data in-the-field through a range of techniques (motion capture, ambisonics, photogrammetry, linear and laser scanning, panoramic video, stereographic panoramas and so on). From digitization to display, eM+’s task is to transform the burgeoning world of cultural data into ultra-high-resolution visualizations through advanced computer science and human computer interaction for public engagement.

For more information, visit: https://emplus.epfl.ch/
EXHIBITION CREDITS

Curators: Sarah Kenderdine, Jeffrey Shaw, Hing Chao
Exhibition scenography: Sarah Kenderdine, Jeffrey Shaw
Exhibition design concept: Matthias Gommel, 2xGoldstein
Architectural design: Matthias Gommel
Graphic design: 2xGoldstein
Custom engineering design & manufacture: Nelissen Decorbouw
Curatorial assistant: Giulia Bini
Produced for ArtLab by EPFL’s Laboratory for Experimental Museology in partnership with City University Hong Kong and the International Guoshu Association.

Kung Fu Motion builds on previous exhibitions curated by Sarah Kenderdine, Jeffrey Shaw and Hing Chao that were presented at City University of Hong Kong, Hong Kong Heritage Museum, Hong Kong Visual Arts Center and Immigration Museum, Melbourne, Australia: 300 Years of Hakka Kung Fu – Digital Vision of its Legacy and Future (2016), Lingnan Hung Kuen Across the Century: Kung Fu Narratives in Hong Kong Cinema and Community (2017).

INSTALLATION CREDITS

Sarah Kenderdine & Jeffrey Shaw: Re-Actor Kung Fu Analytics, Linear Navigator of Kung Fu Weapons, Panoramic Navigator of Jiao Festival, Master Ip Chi Keung’s panoramic studio and slow-motion projection; Oscar Lam video panopticon
Hing Chao, Waterproof Studios, vfxNova: Lam Sai Wing reconstruction
Greg Roy, Marien El Alaoui, Elodie Poroli & Johann Blais: pose matching game and Re-Actor interactive
Tobias Gremmler: Kung Fu Motion Visualization
Tang Ming Tung: photos for Hong Kong urban/rural kung fu panorama
John Choy: panoramic photo of Master Ip Chi Keung’s studio
Salon Films (HK) Ltd.: Hakka kung fu documentary, Jiao Festival drone video recordings
Martha Burr: African Prince documentary
Raphael Chau: Jiao Festival fisheye video recordings
Leeson Cheong: Jiao Festival 360-degree video recordings and post-production
Lau Chi Fung: Motion capture recordings and post-production
Nikolaus Völzow: Panoramic navigator application software

SUPPORTING ORGANIZATIONS

College of Humanities, EPFL
Digital Humanities Institute, EPFL

EXHIBITION PRODUCTION TEAM

ArtLab director: Sarah Kenderdine
Production management: Giulia Bini
Technical installation: Vincent Jaccoud, Patrick Chouard, Joe Leung, Ching Lee
Communications coordinator: Luc Meier
Website: Virginie Martin-Nunez
Exhibition staff coordinator: Valérie Kaltenrieder
Printing: Print Center EPFL

EVALUATION

iShou, Laboratory for Experimental Museology, EPFL

SYMPOSIUM/SUMMER SCHOOL

Archiving Intangible Cultural Heritage – a symposium for living traditions
Co-chairs: Sarah Kenderdine & Nicholas Croft

OPENING KUNG FU PERFORMANCES

Organized by Urs Krebs, Vice President, Swiss Wushu Federation.

Practitioners:
Benjamin Felber, disciple of Patrick Jeannotat, Wing Chun: Mok Yan Chong (Wooden Dummy)
Thorsten Berndt, disciple of Wu Meiling, Hung Kuen: Bat Gwa Cheung (Spear)
Pierrick Porchet, Lausanne Wushu Institut, Meihuaquan (traditional northern Style)
Kenny Krebs, seven times European Champion, Chen Style Taijiquan
Patrick Jeannotat, Wing Chun, Pa Cham Do (Butterfly Swords)
Pascal Rüttenauer, Son and disciple of Wu Meiling, Fu Hok Seung Ying Kuen (shortened version)