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Citation

Kadetz, P. I., & Perdomo, J. (2011). Slaves, Revolutions, Embargoes, and Needles: The Political Economy of Chinese Medicine in Cuba. *Asian Medicine: Tradition And Modernity*, 6, 95-122. Retrieved from <https://hdl.handle.net/1887/75265>

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Note: To cite this publication please use the final published version (if applicable).

Slaves, Revolutions, Embargoes, and Needles: The Political Economy of Acupuncture in Cuba

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Abstract

Medical systems have travelled and influenced one another for as long as there has been trade between differing groups. The medical systems of China have been a particularly frequent traveler, facilitated by Chinese migration and trade throughout history. The transfer and subsequent integration of acupuncture into the Cuban health care system can be best understood in terms of various political and economic forces from the mid-nineteenth to the end of the twentieth century. This paper will demonstrate that how acupuncture was transferred to Cuba; why it was integrated into the national health care system of Cuba; and how acupuncture is currently understood and practised in the Cuban context can be best understood as a result of specific political and economic factors.

Keywords

Cuba, TCM, acupuncture, political economy, China

Introduction

The structure of a health care system, and the practices and practitioners that have been integrated into a health care system, can be examined in terms of the impact of political and economic factors, among a myriad of other factors. The examination of these political economic factors is particularly germane to an understanding of the international transfer of non-biomedical systems, such as traditional Chinese medicine (TCM).¹ Similarly, how a non-biomedical system such as TCM is transferred and subsequently altered in its transfer, implementation, and use can also be understood in terms of political economic forces. As a result of colonialism and trade in human labour; the neo-liberalisation of its primary socialist trade partner; the maintenance of a

¹ TCM will be used in this paper to refer to the current system of Chinese medicine that was assembled during Mao Zedong's administration from the local healthcare practices of China that were deemed relevant to biomedicine, and standardized along a biomedical model through a lens of Marxist dialectical materialism and disseminated in the manner of Western medical schools, textbooks, research centres, and hospitals. See Taylor 2005.

socialist state in a global neoliberal trade environment; and externally imposed trade restrictions, such as international embargoes, Cuba offers a noteworthy case, by which to examine the political economic factors influencing the integration and particular use of TCM practices, such as acupuncture, in a formal national health care system.

Cuban public health has become a model for other developing nations with its structure of equal access, popular participation in health initiatives, and integrated approach.² The Cuban health care system has been able to achieve health status measures on a par with industrialised countries despite far more modest infrastructure investment.³ For example, in 2003, Cuba was able to achieve an infant mortality rate equal to, or lower than, the United States and Canada, despite having less than one-sixth of their per capita gross national product and, as of 2006, spending only US\$320 per person per annum on its health care system in comparison to the \$6,714 per person spent in the U.S.⁴

Cuba's post-revolutionary shift from curative care to preventative primary health care has been designated as central to its successful health outcomes. From the late 1970s, Cuba's community-oriented primary care programme evolved with the establishment of community clinics known as *consultorios*.⁵ Under this programme, a doctor–nurse team provides both preventive and curative primary care for approximately 150 families in any given community.⁶ The three-tiered Cuban health care system also includes secondary care polyclinics, offering a range of health care services from physician biomedical specialists, as well as non-biomedical health care practices known as *Medicina Tradicional y Natural* (MTN).⁷ Tertiary care is provided by hospitals and speciality institutions.⁸

Other qualities of the Cuban health care model identified as pertinent to its success include: 'accessibility, universality, comprehensiveness, quality, integration horizontally, primary care focus, integration across sectors (social, environmental focus, etc.), and a health promotion focus'.⁹ Although the Cuban health care system has been praised for its ability to effectively provide health for the entire population with fewer financial resources than most

² Lo 2011.

³ Cooper, Kennelly, Ordunez-Garcia 2006.

⁴ *Ibid.*

⁵ Applebaum, Kligler, Barrett *et al.* 2006.

⁶ *Ibid.*

⁷ *Ibid.*

⁸ *Ibid.*

⁹ Dresang, Brebrick, Murray *et al.* 2005, p. 299.

countries,¹⁰ some critics have identified it as ‘deeply politicized, authoritarian, and repressive’.¹¹

This paper will not attempt to evaluate the outcomes of the Cuban health care system, but rather will chart the complex political and economic forces that shaped the development of this system using the transfer of acupuncture as a case study.



Fig. 1. MTN Clinic.

¹⁰ See, for example, Warman 2001. Swanson, Swanson, and Gill *et al.* 1995. Feinsilver 1993. Waitzkin and Britt 1989. Santana 1988. Baer, Singer and Johnson 1986. Waitzkin 1983.

¹¹ Hirshfield 2006, p. 335.

Colonisation and belief: the development of Cuban health care

The development of the non-biomedical health care system known as *Medicina Tradicional y Natural* (MTN) reflects the history of Cuba and its varied cultural influences. These influences include the indigenous Guanahatabey and Ciboney (circa 4,000 BCE), the Taino Indians, 400 years of Spanish colonisation, African slaves, immigrants from other Caribbean islands, and the Chinese.¹²

From the sixth century, the Taino Indians, a tribe of the Arawaks from the Greater Antilles, migrated to Cuba becoming the predominant population on the Island.¹³ The Tainos have been identified with the cultivation of plants specifically for medicinal purposes.¹⁴ Medicinal plants were used in conjunction with diet, massage, and religious rituals.¹⁵ Plants with hallucinogenic properties, such as the Jimson weed (*Datura stramonium*), were favoured by diviners and healers.¹⁶ The Spanish colonists that arrived in 1492 brought the biomedical tradition along with a hot/cold classificatory system of disease that persists to this day.¹⁷ The early Spanish doctors on the island are believed to have integrated the Taino's use of indigenous plants.¹⁸ In order to supplement a subsequently reduced population of Indian labourers, the Spanish colonists began to import Africans as slaves, predominantly from Senegal and the Guinea Coast from 1510.¹⁹ The Africans arrived with some of their native plant species, which became an important component of Cuban medicines and the Cuban *materia medica*.²⁰

However, possibly more important than the transfer of the actual plants was the transfer of beliefs affiliated with these medicines. The Yoruba belief in spirits representing elemental forces of nature, as well as states of being (*orichas*), became part of the local religion of *Santería*.²¹ The syncretism of Yoruba, Roman Catholic, and indigenous beliefs in *Santería* is illustrated in the identification of *orichas* with Catholic saints, purported to have originally been a creative solution to Spanish colonial religious restrictions.²² In *Santería*,

¹² Encyclopaedia Britannica 2011. Volpato, Godínez and Beyra 2009.

¹³ Encyclopaedia Britannica 2011. Stafford 2010.

¹⁴ Stafford 2010.

¹⁵ Stafford 2010.

¹⁶ *Ibid.*

¹⁷ Foster 1994.

¹⁸ Stafford 2010.

¹⁹ Encyclopaedia Britannica 2011.

²⁰ Cano and Volpato 2004.

²¹ Gonzalez-Wippler 1992. Mason and Edwards 1985.

²² Stafford 2010.

plants believed to be infused with divine healing powers are commonly used in ritual.²³

Acupuncture: a medicine of indentured servitude

Into this complex mix of belief and practices entered Chinese medicine. The global dissemination of Chinese medicine can, at least in part, be understood as a result of the Chinese diaspora. According to the World Bank, US\$48 billion was sent home to China by overseas workers in 2009.²⁴ Currently there are an estimated 40,000,000 overseas Chinese with 114,240 specifically in Cuba.²⁵ From 210 BCE waves of Chinese emigration have occurred throughout recorded history as a result of political, economic, domestic, and international circumstances.²⁶ The mass emigrations from China from the nineteenth to mid-twentieth century have been formally referred to as the Chinese diaspora.²⁷

From 1847 to 1873 more than 200,000 Chinese (primarily farmers from Canton) arrived in Cuba with promises of employment that would amass fortunes; however, in reality they faced indentured servitude.²⁸ This particular chapter of the Chinese diaspora was a result of numerous international changes. The Treaty of Nanking ended the opium wars and resulted in the ‘creation of Hong Kong as an outpost of British imperialism’ that facilitated access to labourers from South China and led to a marked increase in Chinese labour migration.²⁹ Similarly, Chinese labour migration during this period can be traced to the expansion of world markets into the Pacific.³⁰ Simultaneously, the early nineteenth-century abolitionist campaigns in the United States and England resulted in the restructuring of slave labour.³¹ In the context of Cuba, this restructuring led to the Spanish procurement of Chinese workers.³²

The Spanish colonists in Cuba had established an understanding of the Chinese, having worked alongside Chinese traders over several centuries in the

²³ *Ibid.*

²⁴ Barmé 2010.

²⁵ *Ibid.*

²⁶ Pan 1994.

²⁷ *Ibid.*

²⁸ Delgado Garcia 1995.

²⁹ McKeown 1999, p. 313.

³⁰ *Ibid.*

³¹ Dabney 2006.

³² *Ibid.*

Philippines.³³ The Chinese who made their way to Cuba were predominantly poor peasants from Southeast China who believed that labour on sugar or tobacco plantations would eventually bring them wealth.³⁴ They were also assigned duties as tailors, hat makers, cigar and cigarette makers, cooks, gardeners, waiters, carpenters, and hotel or house servants.³⁵ Although the Chinese contracts stated that they were wage labourers, their contracts were usually sold to plantation owners for the equivalent of US\$60.³⁶ Subsequently, the Chinese labourers were paid a minimal amount and, for the most part, treated as indentured servants.³⁷ More than thirteen percent of the Chinese workers died en route to Cuba or in fulfilling their contracts in Cuba.³⁸

The Chinese maintained their own community in Cuba in an area called *Sagua la Grande*.³⁹ *Sagua la Grande* eventually housed a Chinese theatre, and numerous service businesses including tailors, barbers, candy stores, gambling houses, opium shops, and Chinese physicians.⁴⁰ The Spanish colonists were reported to have held the Chinese physicians in higher esteem than their own physicians, 'whom nobody trusted'.⁴¹ Several of these physicians were reportedly famous for their treatments: Kan Shi Kom, Domingo Morales, Liborio Wong (aka Wong Seng) and Juan Chambombian (aka Chang Pon Piang on his arrival to Cuba).⁴² The latter won popular recognition for a particularly successful clinical practice in the late 1800s.⁴³ This early regard for doctors of Chinese medicine would prove integral to the Cuban government's future support of acupuncture.⁴⁴

The Needle and the Ploughshare: a medicine eclipsed by the revolutionary fervour of modernity

Although the formalised restructuring of various schools of Chinese Medicine in alignment with standardised biomedicine can be traced to, at least, the

³³ Dolan 1991.

³⁴ Dabney 2006.

³⁵ *Ibid.*, p. 172.

³⁶ *Ibid.*

³⁷ *Ibid.*

³⁸ *Ibid.*

³⁹ Dabney 2006.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*, p. 178.

⁴² Lo 2011, Dabney 2006.

⁴³ Roig de Leuchsenring 1965.

⁴⁴ Delgado Garcia 1995.

Republican era in China (1911–1949), traditional Chinese medicine reached a peak in its standardised formation under the direction of biomedical physicians in Mao Zedong's administration.⁴⁵ That TCM developed and has since thrived in socialist political economic contexts may come as no surprise to students of TCM, who have been taught that historically the best doctors of Chinese medicine had no patients, for their patients were taught how to care for themselves. Prevention through a healthy life regimen of moderation was and remains central to the practice of Chinese medicine. This fundamental emphasis on prevention rendered TCM particularly appropriate for a newly revolutionised government adhering to a socialist ideology and promoting universal health care as one of its primary objectives.

Clearly, such an ideology challenges a for-profit medical model. Hence, for a political and economic system seeking to redress health care disparity amongst the populace, there is something truly revolutionary in subverting the role of the professional, for-profit, medical practitioner-interventionist, and recasting the practitioner as a teacher and promoter of prevention via the patient's adherence to lifestyle changes and acceptance of the responsibility to care for oneself. It is a markedly different paradigm from the one Foucault depicts of biomedicine as being operable only through the paternalistic control of the population (i.e. power) via the physician's professional knowledge, and thereby ensuring a dependence on the medical professional/businessman in perpetuity.⁴⁶

Interestingly though, Chinese medicine was not immediately embraced after the Cuban revolution. Quite similar to its trajectory in China (where it was initially dismissed by Mao and the Chinese Communist Party as 'old medicine' before being embraced by Mao as a 'national treasure', in particular to redress rural health disparities), Castro originally rejected all non-biomedical practices as archaic.⁴⁷ In fact beginning in 1961, Chinese pharmacies in Cuba were closed down until only one remained open.⁴⁸ Modernisation was the discourse that fuelled the early Cuban communist State.⁴⁹ Hence, the State's initial discouragement of local non-biomedical health care through the distribution of pharmaceuticals in the early twentieth century was now further

⁴⁵ Lo 2011. Taylor 2005.

⁴⁶ See, for example, Foucault 1980 and 1975.

⁴⁷ Taylor 2005. Rosenthal 1981.

⁴⁸ Stafford 2010. Though some claim the cause of these closures was more likely the nationalisation of all businesses, rather than the specific targeting of Chinese medicine (*Ibid.*)

⁴⁹ Cochetti 2008.

enforced by Fidel Castro's renewed emphasis on the biomedical modernisation of Cuba.⁵⁰

In Castro's 1953 speech, 'History will Absolve me' (*La Historia me Absolverá*), the health of the population is proclaimed to be an important indicator of the success of governance. The 1975 Cuban constitution incorporated health as a right and responsibility of the state.⁵¹ As a result of this constitutional change, Castro's government instituted the Ministry of Public Health along with 'a national health system... the nationalization of private clinics and pharmaceutical companies... and social and rural health care services at little or no cost'.⁵² The goal of these changes was to provide full access to biomedicine. However, there was little focus on preventative work in these health reforms until the Family Doctor Programme was introduced in 1984.⁵³

The modernisation of the Cuban medical system could have been severely undermined by the U.S. trade embargo against Cuba, which began in 1961.⁵⁴ However, the first three decades of the embargo had negligible effects on Cuba and Cuban health care, which were protected by maintaining 70% to 90% of international trade (trade which included pharmaceuticals and medical supplies) with Soviet bloc countries.⁵⁵

Nonetheless, despite these political economic changes—which were scarcely conducive to the integration of a non-biomedical practice such as acupuncture into the national health care system—acupuncture was slowly being formally introduced during this early post-revolutionary phase. Historically, acupuncture was informally practised in Cuba by the Chinese minority that had remained in Cuba after their work contracts had ended.⁵⁶ After the revolution, acupuncture started to be employed for specific biomedical procedures. For example, surgical acupuncture analgesia was first practised in Cuba in 1975.⁵⁷

Interestingly, the Ministry of Defence played the key role in the formal integration of acupuncture, among other non-biomedical health care practices. In the late 1980s, military policy warned that Cuba needed to be prepared for self-sufficiency in the event of a complete trade embargo, thereby taking the first steps toward a formal integration of *Medicina Tradicional y Natural*

⁵⁰ After the Cuban revolution, local practices, including religious practices, were actively discouraged; if biomedical practitioners used or referred patients for non-biomedical practices or practitioners, they would be sanctioned by the Ministry of Public Health. Brotherton 2005.

⁵¹ Official Gazette of the Republic of Cuba 2003, p. 3.

⁵² Stafford 2010, p. 42.

⁵³ Lo 2011.

⁵⁴ Garfield and Santana 1997, p. 15.

⁵⁵ *Ibid.*

⁵⁶ Lo 2011.

⁵⁷ Padron Caceres and Perez Vinas 2005.



Fig. 2. Auriculotherapy with press balls.

(MTN) into the Cuban health care system.⁵⁸ The military's commitment to health care integration was evident with the opening of the Central Laboratory of Herbal Medicine by the Ministry of Defence at their Higher Institute of Military Medicine.⁵⁹ However, it was not until the 1990s that acupuncture, (among other non-biomedical health care practices) received major support from both the Cuban Government and the Public Health Ministry.⁶⁰

Formal Integration as a Result of International Political Economic forces: a medicine for embargoes

The military's preparatory steps toward the widespread use of MTN were unerringly prescient. Cuba's protection from the ongoing U.S. embargo vanished with the dissolution of the Soviet bloc. Cuba had produced sugar for the Soviet Union—which paid higher than world market prices for Cuban exports, and exported Soviet goods in return.⁶¹ After the collapse of the Soviet bloc in 1989, Cuba lost 85% of its foreign trade with an 80% reduction in Cuban exports and a 70% reduction in Soviet bloc exports to Cuba from 1989 to 1993.⁶² Cuba's Gross National Product 'declined by 35%; and the value of imports from all sources declined from US\$8 billion to \$1.7 billion'.⁶³ The resulting 60% decline in Cuba's Gross Domestic Product is one of the largest on record.⁶⁴ However, Cuba lost not only its most important trading partner, but also its primary source for the raw materials of pharmaceutical production.⁶⁵

To add to Cuba's plight, the United States, at this juncture, strategically exacerbated trade restrictions in its historic embargo against Cuba, the longest such embargo in modern history.⁶⁶ In 1992, the U.S. embargo was made even more punitive with the passage of the (ironically titled) Cuban Democracy Act, whereby all U.S. subsidiary trade to Cuba, including trade in food and medicines, was prohibited.⁶⁷ Furthermore, any ships docking in Cuba were prohibited from docking at U.S. ports for six months thereafter, even if their

⁵⁸ Stafford 2010.

⁵⁹ *Ibid.*

⁶⁰ Padron Caceres, and Perez Vinas 2005.

⁶¹ Lo 2011.

⁶² Lo 2011. Stafford 2010. Garfield and Santana 1997.

⁶³ Garfield and Santana 1997, p. 15.

⁶⁴ *Ibid.*

⁶⁵ Stafford 2010.

⁶⁶ Garfield and Santana 1997, p. 15.

⁶⁷ Stafford 2010.

Cuban cargoes were solely humanitarian goods.⁶⁸ The perverted logic of the Cuban Democracy Act—that democracy in Cuba would be promoted by completely isolating the island—was in fact, a direct reversal of the logic of neoliberalism—namely, that democracy is only fully promoted through free markets⁶⁹—and moreover a complete rejection of the democratic principles of sovereignty and autonomy upon which the United States was founded.

Hence the United States' application of substantial pressure on other countries to cease both trading with, and providing humanitarian goods to, Cuba resulted in a near-global trade blockade against Cuba. 'Non-US firms in such countries as Switzerland, France, Mexico, and the Dominican Republic were reportedly threatened by U.S. embassy personnel with commercial reprisals unless they cancelled planned sales to Cuba of goods ranging from soap to milk.'⁷⁰ In terms of biomedicine, the Cuba Diplomacy Act strictly prohibits trade of 'medicines or medical devices with 10% or more of their components made by a US company or foreign subsidiary of a US corporation... medical supplies for humanitarian aid can be sent to Cuba only after the Cuban government holds free and fair elections'.⁷¹

Such restrictions are extremely problematic in terms of access to pharmaceuticals and to materials for the domestic production of pharmaceuticals, considering that the pharmaceutical industry is predominantly controlled by U.S. transnational corporations.⁷² The dollar value of imports for health to Cuba fell from US\$227 million in 1989 to \$67 million in 1993.⁷³ Many of the hard-won benefits of the Cuban health care system were quickly being reversed despite the State's organised targeting of limited resources to vulnerable populations including the elderly, children, and women.⁷⁴

In summary, the resulting shortage of pharmaceuticals was associated with a 67% increase in deaths due to infectious and parasitic diseases and a 77% increase in deaths due to influenza and pneumonia from 1989 to 1993, and a 48% increase in tuberculosis deaths from 1992 to 1993.⁷⁵ And yet, despite these harsh conditions Cuba succeeded in becoming 'the first country to be free of the circulation of wild polio virus in 1993', as certified by the World Health Organization.⁷⁶

⁶⁸ Garfield and Santana 1997, p. 15.

⁶⁹ Friedman 2002.

⁷⁰ Garfield and Santana 1997, p. 19.

⁷¹ Stafford 2010, p. 43.

⁷² *Ibid.*

⁷³ Garfield and Santana 1997, p. 18.

⁷⁴ Applebaum, Kligler, Barrett *et al.* 2006.

⁷⁵ Garfield and Santana 1997, p. 17.

⁷⁶ Garfield and Santana 1997, p. 18.

It was in this context that the Cuban government completely reversed its position on the use of non-biomedical practices. Following specific orders from Castro, non-biomedical health care practices were promoted as an important element of Cuban health care.⁷⁷ Suddenly, non-biomedical practices that had hitherto been slowly and, at best, selectively and reservedly promoted or researched by the State could scarcely be integrated into the national health care system quickly enough. The Ministry of Health collaborated with the Ministry of Agriculture on the growth of medicinal plants in State-operated farms.⁷⁸ Research was conducted by the Ministry of Defence in collaboration with other institutions for the planned cultivation of medicinal plants and herbs throughout Cuba.⁷⁹ In 1990, the Ministry of Health approved 51 plants for medicinal purposes, and in 1994 some of these were added to the list of essential drugs.⁸⁰ Reports identify that plant medicines may have replaced as many as 80% of the pharmaceuticals previously prescribed.⁸¹

However, the most notable reform during this period was the formal integration of non-biomedical health care practices—now classified as a medical speciality under the rubric of *Medicina Tradicional y Natural* (MTN)—into the national health care system. In 1992, MTN was formally incorporated into the Cuban health care system through a national mandate.⁸² By 1995, a state commission was developed by the Ministry of Health for the development of MTN throughout Cuba.⁸³ In 1999, the National Program for MTN approved the use of acupuncture, homeopathy, chiropractic, and native medicinal plants in the national health system.⁸⁴ And in 2002, the Acuerdo del Comité Ejecutivo del Consejo de Ministros [Agreement of the Executive Committee of the Council] established a regulatory framework for the practice of MTN.⁸⁵ The professionalisation of acupuncture in Cuba was reflected in the formation of professional organisations. By 2000, professional associations such as the Cuban Society of Bioenergetic and Naturalist Medicine

⁷⁷ Cooper, Kennelly, Ordunez-Garcia 2006.

⁷⁸ Stafford 2010.

⁷⁹ *Ibid.* Cuba currently produces 300 metric tons of more than 100 different species of medicinal plants on 124 ranches throughout the country. Stafford 2010, p. 45.

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

⁸² Applebaum, Kligler, Barrett *et al.* 2006.

⁸³ *Ibid.*

⁸⁴ Stafford 2010.

⁸⁵ Lo 2011.

(CSBNM) and the National Direction of Natural and Traditional Medicine were founded.⁸⁶

Coordination of the development, integration, regulation, and promotion of MTN and its products fell under the jurisdiction of a government agency (The National Centre for the Development of *Medicina Tradicional y Natural*) which operates through 14 regional centres, the department's polyclinics, research institutes, and hospitals.⁸⁷ The newly integrated health care system was promoted through public awareness campaigns in print media, TV, and radio, and through community participation activities.⁸⁸ Treatment with plant medicines was now available in settings ranging from clinics and hospitals to day care centres.⁸⁹ Education concerning the use of medicinal plants began as early as primary school, where children were taught how to grow their own medicinal plants.⁹⁰ However, it is questionable how much of this campaign was necessary, as a majority of Cubans, especially in more rural areas, have continuously relied on local plant medicines for much of their informal health care.⁹¹

As of 2002, 86% of Cuban physicians practised some form of MTN, and 100% of Cuban hospitals offered acupuncture anaesthesia for surgical procedures.⁹² By 2008, 'more than 21 million patients were prescribed MTN, 12.6 million (60%) of whom were in a primary health care setting, 6.8 million (32%) in dentistry, and 1.8 million (9%) in hospitals'.⁹³ The use of acupuncture anaesthesia in surgery alone accounted for nearly 10% 'of the 336,622 major surgeries performed in 2008'.⁹⁴

The increased use of acupuncture during this period may also have been an outcome of further international political economic factors. For example in the early 1990s, China became one of three primary trading partners with Cuba along with Russia and Canada.⁹⁵ Cuba exported rice, beans, raw sugar, and nickel to China, and China provided loans and credit to Cuba worth US\$700 million to fund State-owned enterprises.⁹⁶

⁸⁶ Padron Caceres and Perez Vinas 2005.

⁸⁷ Stafford 2010.

⁸⁸ Stafford 2010. Applebaum, Kligler, Barrett *et al.* 2006.

⁸⁹ Garfield and Santana 1997.

⁹⁰ Stafford 2010.

⁹¹ *Ibid.*

⁹² Lo 2011.

⁹³ Stafford 2010, p. 45.

⁹⁴ *Ibid.*

⁹⁵ Kuntz 1994.

⁹⁶ *Ibid.*

The Construction of a Specifically Cuban Acupuncture

In its various transmissions around the globe, traditional Chinese medicine has not always been adopted as a complete transfer of an entire epistemological system. For example, Jennings notes:

Chinese medicine in Tanzania has not been accepted by its African users in its entirety. There appears to be little understanding [of], or desire to understand, the complex philosophical and spiritual underpinnings of Chinese medicine as practised in China. Rather, elements have been adapted and borrowed, and through use it has become an Africanised version.⁹⁷

Similarly, in Cuba it is noted that ‘a physician-in-training does not need to embrace and understand every dimension of the Chinese medical paradigm of health and illness to see the potential usefulness of acupuncture for patients with osteoarthritis’.⁹⁸ And Lo identifies that, in order to retain meaning beyond their original social and cultural contexts, ‘living traditions’ will be adapted according to the needs of new social and cultural milieux.⁹⁹

The globalisation of TCM demonstrates this context-specific character, not only in terms of what aspects of TCM are transferred and integrated into a formal health care system, but also in terms of how it is integrated. For example, in some contexts, TCM has been formally integrated into a health care system to the potential detriment of the existing informal health care economy. In local level research in the Philippines, Kadetz identified instances in which non-biomedical practitioners providing community health care for a donation were becoming marginalised by physicians and nurses that were now practising acupuncture and charging fees.¹⁰⁰ In this manner, the importation and integration of TCM into a formal health care system is actually compromising access to health care for some populations.

However, unlike the Philippine health care system, the Cuban health care system provides universal free coverage and thus access to health care would not be compromised by the formal introduction of, for example, acupuncture practised by physicians. Furthermore, local informal health care practices and practitioners that have not been integrated into the formal health care system in Cuba have not been marginalised by MTN. For example, *santeros*—who typically dispense spiritual advice and use herbal remedies—are often consulted by patients before, or in conjunction with, consulting their primary

⁹⁷ Jennings 2005, p. 467.

⁹⁸ Applebaum, Kligler, Barrett *et al.* 2006, p. 47.

⁹⁹ Lo 2009.

¹⁰⁰ Kadetz 2011a, 2011b.

physician.¹⁰¹ Similarly, as part of the integration of MTN, the Cuban government has reversed the prohibition on the sales of medicinal plants specifically used for *Santería*.¹⁰² And whilst *yerberos*, local herbalists, are mandated by the Ministry of Agriculture to complete a two-week course addressing the benefits and potential dangers of certain herbs in order to be granted a license to provide (and sell) herbs for medicinal and spiritual healing, they continue to practise in parallel with physicians providing MTN.¹⁰³ Furthermore, it has been noted that family physicians commonly ‘refer [their patients] to natural medicine clinics for therapies that they do not perform themselves’.¹⁰⁴ Hence, the political and economic context of health care in Cuba has been particularly conducive to a plural health care system that fosters autonomy and self-determination in health care choices on the part of both the practitioner and the patient.

The Transmission of Acupuncture in Cuba

The *formal* transmission of acupuncture to Cuba cannot be traced to the Chinese migrants living in Cuba. Nor indeed, for that matter, can it be traced to China specifically. In 1962, after a Havana seminar hosted by a physician who founded the Medical Institute of Acupuncture in Argentina, Floreal Carballo, acupuncture was formally, albeit minimally, introduced into the Cuban Public Health System.¹⁰⁵ Further acupuncture courses during the 1980s and 1990s employed American acupuncturists.¹⁰⁶ And several introductory acupuncture textbooks were published in Cuba during the 1980s.¹⁰⁷

However, despite its acceptance in certain circles, acupuncture would not be fully accepted by the government and medical community until 1988, when three consultants from military academies in North Korea, North Vietnam, and China were invited by the Minister of Military Affairs of Cuba to organise a speciality of traditional military medicine.¹⁰⁸ And in 2001, a medical textbook with a substantial chapter devoted to ‘traditional and Eastern medicines’ was published in Cuba.¹⁰⁹ Hence, the circuitous dissemination of

¹⁰¹ Applebaum, Kligler, Barrett *et al.* 2006, p. 45.

¹⁰² Stafford 2010.

¹⁰³ Applebaum, Kligler, Barrett *et al.* 2006, p. 45.

¹⁰⁴ Dresang, Brebrick, Murray *et al.* 2005, p. 301.

¹⁰⁵ Acosta Martínez 2000.

¹⁰⁶ Padron Caceres and Perez Vinas 2005.

¹⁰⁷ *Ibid.*

¹⁰⁸ *Ibid.*

¹⁰⁹ Huish and Kirk 2007, p. 86.

acupuncture from these various sources contributed to the construction of what was to be understood as acupuncture in the Cuban context.

The Cuban construction of acupuncture and the formal State integration of acupuncture can be further contextualised in terms of the plural curricula of the new speciality of MTN taught in Cuban medical schools from the 1990s. Currently, both the theory and practice of several MTN practices form part of the core curriculum in all 23 of Cuba's medical schools.¹¹⁰ Medical students are required to complete a minimum 40-hour intensive MTN course that includes clinical rotations in an MTN clinic.¹¹¹ In addition to acupuncture and Cuban herbal medicine, the intensive MTN course includes training in 'trigger point injections, massage, heat therapy, transcutaneous electrical nerve stimulation, magnetic therapy, pyramid therapy, moxibustion, fangotherapy (mud treatment), cupping, laser/photograph therapy, floral/essence therapy, homeopathy, yoga, meditation, exercise training, music and art therapy',¹¹² and naturopathy.¹¹³

After graduating from medical school, physicians must complete two-year residencies.¹¹⁴ The first year of the residency incorporates 120 hours of MTN.¹¹⁵ During this course, residents are taught complex concepts and treatment plans using Chinese medicine and medicinal plants. Residents learn clinical applications using the eight parameters of diagnosis: (i.e. interior–exterior, cold–hot, deficiency–excess, and Yin–Yang); as well as techniques of needle insertion, with manual and electrical needle stimulation.¹¹⁶ Cuban doctors may further specialise in MTN through a four-year MTN residency offering 'a deeper incorporation of different philosophies of healing, and more advanced techniques for diagnosis and therapy particularly in Chinese medicine (acupuncture, moxibustion), Cuban herbal medicine, physical medicine (massage, physical therapy), psychotherapies (hypnosis, meditation, biofeedback) and homeopathy and use of flower essences'.¹¹⁷ Currently, there are approximately 50 MTN specialists in Havana, and many throughout the country who have completed the four-year MTN residency.¹¹⁸ Health professionals who are not

¹¹⁰ *Ibid.*

¹¹¹ Stafford 2010.

¹¹² Dresang, Brebrick, Murray *et al.* 2005, p. 301.

¹¹³ Huish and Kirk 2007, p. 86.

¹¹⁴ Stafford 2010.

¹¹⁵ Applebaum, Kligler, Barrett *et al.* 2006, p. 46.

¹¹⁶ *Ibid.*

¹¹⁷ *Ibid.*

¹¹⁸ *Ibid.*

physicians have the opportunity to obtain a two-year post-graduate degree in MTN, with a focus on research methods in MTN.¹¹⁹

Lo observed in her fieldwork in Cuba that although elements of acupuncture have been absorbed seamlessly into Cuba's own medicine, Cuban acupuncture remains distinct from Chinese acupuncture.¹²⁰ This unique transmission of acupuncture will impact on the practice of what can be identified as Cuban acupuncture. Although acupuncture is distinguished as one of the most highly integrated non-biomedical practices in MTN,¹²¹ it is but one practice taught amongst a multitude of other non-biomedical practices within a brief period of training. Therefore, it is unlikely that given this training alone—with its overall emphasis on TCM diagnosis and treatment according to biomedical categories—much beyond a superficial understanding of TCM theory would be possible.

Furthermore, the manner in which the biomedical curriculum integrates the teaching of MTN practices perpetuates a predominantly biomedical construction of the use of varied non-biomedical practices in treatment. For example, 'meridians and acupuncture points are taught on cadavers in basic anatomy class'.¹²² Such a pedagogical approach will reinforce an understanding of acupuncture primarily from a geographic and visual construct, rather than from the development of sensitisation of touch and experience of *qi* (which, of course, would be rendered impossible with a cadaver).

Additionally, all MTN practices, including acupuncture, are represented as adjunctive or complementary treatments in the service of biomedicine specifically for biomedically classified diseases: 'in addition to learning about conventional anti-hypertensives, students are schooled in diet, exercise, hypnosis techniques, herbs, and acupuncture points for lowering blood pressure and reducing stress'.¹²³ Thereby, acupuncture is not directed toward the treatment of a particular Zang-fu pattern that may be correlated with the biomedical diagnosis of hypertension, but rather used in a biomedical manner as an adjunct to anti-hypertensive pharmacotherapy. Such biomedically oriented symptom-related treatment is repeated throughout the MTN curricula. For example, in surgical rotations, students are taught the acupuncture points that can be used for anaesthesia, and in physical rehabilitation, acupuncture is specifically taught with reference to neuromusculoskeletal pathology.¹²⁴

¹¹⁹ Stafford 2010.

¹²⁰ Lo 2011.

¹²¹ Stafford 2010.

¹²² Applebaum, Kligler, Barrett *et al.* 2006, p. 46.

¹²³ *Ibid.*

¹²⁴ *Ibid.*

Again, the structure of these MTN curricula and the manner in which acupuncture and MTN have been taught and applied is also an outcome of the need to rapidly integrate MTN into the national health care system—by utilising all existing Cuban resources—as a result of the critical political economic circumstances of the 1990s, which compromised the availability of biomedical resources. The actual utilisation of acupuncture in practice is best illustrated by a specific case example of the use of acupuncture in Matanzas.

Matanzas: a case example of the national health care integration of acupuncture

After acupuncture was introduced in Havana it was brought to the province of Matanzas, located 60 miles from Havana, with a population of 125,000.¹²⁵ From the mid-1990s to 2003, the province received the first Traditional and Alternative Medicine military physician and subsequently four more Traditional and Alternative Medicine physicians who pioneered the development of acupuncture in Matanzas. As, elsewhere in Cuba, a provincial Centre for the development of MTN was created in Matanzas in 1995 and became both a provincial and national centre of acupuncture and MTN.¹²⁶ The centre has been influential throughout the region providing diploma courses in MTN and applied acupuncture for physicians, with a focus on the treatment of various biomedical pathologies.¹²⁷ Matanzas has been the only province in Cuba to have a civil hospital certified for a MTN training programme according to Ministry of Public Health standards.¹²⁸

In 2003, data collection began concerning the use of MTN in Cuba. In that year, 26,968,515 patients in Cuba were recorded to have been treated with any practice classified as MTN, whereas in Matanzas Province 1,466,335 patients were recorded in the same period.¹²⁹ A slight decrease in the number of patients treated with MTN is observed in 2008 with 21,298,121 nationally and 1,419,033 treated in Matanzas.¹³⁰ Of the patients treated in Matanzas, 144,722 patients (10%) were treated specifically with acupressure and 310,425

¹²⁵ Applebaum, Kligler, Barrett *et al.* 2006.

¹²⁶ Baluja Gallent 2008.

¹²⁷ *Ibid.*

¹²⁸ *Ibid.*

¹²⁹ Ministerio de Salud Pública 2003.

¹³⁰ Ministerio de Salud Pública 2008.

patients (21%) were treated with acupuncture.¹³¹ Thus nearly one-third of MTN treatments in Matanzas utilised TCM.

In general, throughout Cuba, acupuncture has progressively become associated with specific biomedical disease categories and hospital departments. For example, Departments of Emergency Medicine now include acupuncture in treatments for cardiovascular emergencies, such as acute strokes, heart attacks, and dissecting aneurysms.¹³² In Matanzas, approximately 10% of patients passing through the provincial hospital's accident and emergency department received some form of MTN treatment in 2008.¹³³ This application of acupuncture for emergency cardiovascular treatment is found in addition to the more common indications of acupuncture in Cuban clinical practice to treat hypertension, acute asthma, gastrointestinal pathologies, and pain.¹³⁴

Acupuncture research has also become central in Matanzas. Recent research has included assessments of outcomes from acupoint injection, surgical acupuncture analgesia, apex bloodletting for high blood pressure crisis, and the use of acupuncture for treatment of chronic pain.¹³⁵ Again, the research illustrates an understanding of acupuncture solely as an adjunct in the service of a biomedical paradigm of pathology and treatment.

Matanzas provides insight into how acupuncture, in particular, is being integrated into the Cuban health care system. It is noteworthy that integration commences with the training of physicians and thus integrated practices are predominantly understood from a biomedical model; albeit a Cuban biomedical model that emphasises comprehensive primary health care and prevention. Hence, it could be argued that in its dissemination from various sources (e.g. China, Vietnam, North Korea, Latin America, and the United States), and in its integration into the formal Cuban health care system among several non-related Western non-biomedical practices, the acupuncture that has been formally integrated into the Cuban health care system is theoretically unique and adapted to the purposes of the Cuban context, which is shaped by specific political and economic constraints.

¹³¹ Dirección Provincial de Salud-Matanzas 2008.

¹³² Lo 2011.

¹³³ *Ibid.*

¹³⁴ *Ibid.*

¹³⁵ See, for example, Perdomo Delgado 2008. Perdomo Alvarez 2005. Cabana Salazar 2002.

The Globalisation or Glocalisation of TCM: pre-existing factors that may influence adoption

The globalisation of TCM has been documented from Guatemala¹³⁶ to Tanzania¹³⁷ and in a wide variety of countries in between. However, in many of these contexts, it has been noted that TCM has been adapted to suit local needs and understandings. According to Jennings, 'glocalisation', refers to the process by which the local and the global combine 'to create something that both reflects its constituent parts and functions as something distinctive'.¹³⁸

The pre-existence of similar practices may identify why some TCM practices have been embraced strongly in certain contexts. Cuban herbalism is one such example. Common plants have been identified in both Cuba and China, and most interestingly, the indications and uses of these herbs are often similar in both.¹³⁹ Such herbs as Aloe vera, *Cucurbita moschata*, *Curcuma longa*, *Foeniculum vulgare*, *Gardenia jasminoides*, *Lycium chinense*, *Morus alba*, *Nelumbo nucifera*, *Punica granatum*, and *Zingiber officinale* are commonly used in both China and Cuba.¹⁴⁰ For example, the applied use and indications of *Zingiber officinale* (Ginger) illustrate marked correlations between Chinese and Cuban conceptualisations. Ginger is indicated for the treatment of gastrointestinal disorders, coughing, and respiratory pathology in both the Chinese and Cuban *materia medica*.¹⁴¹

Hence, it may also be possible that the Cuban population's wide acceptance of acupuncture is linked to a similar indigenous practice or pre-colonial transfer, although this has not been documented. For example, García, Sierra, and Balam have identified practices of ancient Mayan medicine that demonstrate 'the most developed autochthonous system of acupuncture in Mesoamerica'.¹⁴² They locate two indigenous variations of acupuncture, *jup* and *tok*, in Mayan communities of the Yucatan peninsula.

Jup is a technique in which discrete points on the body are pricked (using fishbones) several times in rapid succession, but blood is not drawn.¹⁴³ *Jup* is performed in two ways; the same point can be punctured three times at approximately 1 centimetre depth, or the same point on the body can be

¹³⁶ Kadetz 2008.

¹³⁷ Hsu 2002.

¹³⁸ Jennings 2005, p. 467.

¹³⁹ Lo 2011.

¹⁴⁰ Perdomo and Gonzalez 2011.

¹⁴¹ *Ibid.*

¹⁴² García, Sierra and Balam 1999, p. 109.

¹⁴³ *Ibid.*

punctured repeatedly until a local inflammatory response is achieved.¹⁴⁴ In *tok*, a point on the body is punctured in order to draw blood (often facilitated with cupping over the point).¹⁴⁵

Unlike the rapid repeated puncture method of *jup*, in TCM an acupuncture point is needled and the needle is normally retained for 15 to 20 minutes.¹⁴⁶ However, in the Chinese medicine technique known as *ci xue liao fa*, bloodletting occurs (often with cupping) as in *tok*.¹⁴⁷ In TCM acupuncture, more than 350 points are identified that can be used in treatment.¹⁴⁸ Garcia, Sierra, and Balam have identified 50 body points used in *tok* and *jup*, all of which have been correlated with the location of TCM acupuncture points.¹⁴⁹ For example, a common and important point on the body in both TCM (*yintang*) and *tok/jup* (*tok lu ni*) is located midway between the eyebrows.¹⁵⁰ The skin is lifted and pierced at this point in both medical systems.¹⁵¹ In *tok/jup* this point is punctured both in children as a prevention against future illness and in adults to stop 'evil wind attacks' that may cause headaches.¹⁵² In TCM, this point can be used for headaches, as well as for 'clearing external wind-heat' pathogens and pathology in the brain and nose, calming the spirit of the patient, and treating hypertension.¹⁵³ The similarity of these systems may offer one explanation of why acupuncture was noted to be so readily accepted into some Mayan communities.¹⁵⁴ This may also possibly offer a route for future inquiry in understanding acupuncture's current acceptance in Cuban populations.

Conclusion: the integration of acupuncture as a function of political economy

The impulse to integrate acupuncture into the Cuban health care system is undeniably reminiscent of the original integration of acupuncture into the formal national Chinese health care system by Mao Zedong, faced with the then critical need to redress rural health disparity in China using the resources

¹⁴⁴ *Ibid.*

¹⁴⁵ *Ibid.*

¹⁴⁶ Xinning 1996.

¹⁴⁷ Garcia, Sierra and Balam 1999, p. 110.

¹⁴⁸ Xinning 1996.

¹⁴⁹ Garcia, Sierra and Balam 1999, p. 110.

¹⁵⁰ Garcia, Sierra & Balam 1999, p. 112. Xinning 1996.

¹⁵¹ *Ibid.*

¹⁵² Garcia, Sierra & Balam 1999, p. 112.

¹⁵³ Xinning 1996, p. 231.

¹⁵⁴ Kadetz 2008.

at hand.¹⁵⁵ Cuba's integration of acupuncture can also be contrasted with the slower, more methodical integration, primarily controlled by physicians, that can currently be identified in many Western nations. Hence, the similarity between China and Cuba's integration of acupuncture may be understood not so much as a function of economic necessity, as a function of a particular kind of political leadership within a political system that engenders State control over the autonomy of physicians and the business of medicine for profit. Hence, the manner in which a non-biomedical health care practice, such as acupuncture, is integrated into a national health care system may be, at least in part, determined by the political economic structure in which the health care system functions, as well as the locus of State control of health care policy in relation to the autonomy of health care practitioners.

Furthermore, in the Cuban context, health care integration facilitated the achievement of a political mandate. The integration of acupuncture into the health care system facilitated the Cuban constitutional demand for health as a human right; for acupuncture, among other MTN modalities, was universal in its capability of reaching remote areas, being both accessible to all and cost-effective.¹⁵⁶ Thus in helping the State to achieve the goals of the constitution, the integration of acupuncture can be understood to potentially have reinforced the power of the Cuban State.

This paper has argued that the integration of acupuncture into the formal national health care system of Cuba can be understood to have evolved as a function of political economy and trade. From the human trade of Chinese labourers in the nineteenth century, to the cessation of primary trade with the Soviet Union, to the lack of trade and access to pharmaceuticals and medical supplies due to the United States' intensified embargo in the early 1990s—all these factors have had a marked effect on the health care system of a country dedicated to universal health care.

However, it must also be remembered that the documented successes and strengths of the Cuban health care system (especially in light of the manifold obstacles that could have thwarted those successes) lie not only in the particular practices that have been integrated into the health care system, but also in the emphasis on the equitable distribution of those practices,¹⁵⁷ as well as the political ideology whereby the health of the population is a key indicator of the success of the Cuban revolution.¹⁵⁸

¹⁵⁵ Taylor 2005. Rosenthal 1981.

¹⁵⁶ Ramirez Marquez, Castell-Florit, Serrate and Mesa 2003.

¹⁵⁷ Chomsky 2000.

¹⁵⁸ Feinsilver 1995.

The integration of acupuncture into the Cuban health care system also provides a case history for the growing literature on the effectiveness of ‘South-South’ transfers; the need for alternative paradigms of development; and the importance of seeking context-appropriate technological health care transfers that are cost-effective. However, it is also important to consider that this particular transfer of acupuncture is unique, when compared to its transfer in the majority of other contexts, by virtue of the Cuban political economic system.

In examining such health care transfers as TCM, it is imperative to identify the given political economic structure of a health care system. TCM under Mao’s directives was formed and implemented within an egalitarian–authoritarian economic and social system.¹⁵⁹ Hirshfeld identifies the Cuban economic and social system as belonging to the same egalitarian–authoritarian typology.¹⁶⁰ And Lo draws comparisons between the political economic situation of Cuba in the 1990s—which launched the formal integration of non-biomedical health care practices into the national health care system—with that of China in the 1950s.¹⁶¹ Hence, Cuba’s particular economic and social system may have facilitated both a lack of formal resistance to integration and the relative rapidity with which acupuncture has been formally integrated into the Cuban health care system. In a different political economic system, such factors might not have resulted in the same health care reforms.¹⁶² Thus, the formal integration of TCM into a national health care system in liberal–democratic or other economic and social systems may possibly require a different type of implementation.¹⁶³

Furthermore, the transfer of a non-biomedical health care practice or system is not the same thing as the formal integration of that practice/system. The transfer of acupuncture to Cuba was a result of international political economic conditions leading to the migration and settlement of the Chinese in Cuba. However, the formal integration of acupuncture into the Cuban health care system is far more complex and may be better analysed as a result of a particular political economic tool known as international health diplomacy.

This burgeoning field of study offers several conflicting definitions of health diplomacy.¹⁶⁴ In general, health diplomacy has been defined as any activity between countries that is directed toward benefiting the health of the

¹⁵⁹ Kadetz 2011b.

¹⁶⁰ Hirshfeld 2006.

¹⁶¹ Lo 2011.

¹⁶² Walt 1994.

¹⁶³ *Ibid.*

¹⁶⁴ See, for example, Thompson 2005. Adams *et al.* 2008. Felbaum and Michaud 2010. Fidler 2010. Youde 2010.

population and/or health care of the recipient country, with the underlying intention of improving political, economic, and cultural ties between the donor and recipient countries, which may ultimately fulfil foreign policy goals of the donor country. However, as demonstrated in the case of the U.S. embargo against Cuba, all health diplomacy is not beneficent and we may therefore redefine health diplomacy as: the facilitation or obstruction of international health aid and transfers, used as a form of leverage in international agreements and foreign policy.

Clearly the U.S. international embargo against Cuba was a type of negative health diplomacy, which eventually necessitated the integration of acupuncture, amongst other non-biomedical health care practices, into the formal State health care and medical education systems. Whereas, the USSR's trade and aid during this period can be identified as a positive type of health diplomacy. And China's subsequent support of Cuba after the dissolution of the Soviet bloc may be also understood as a positive type of health diplomacy, which could theoretically have encouraged the use of acupuncture as a primary focus in *Medicina Tradicional y Natural*.

Furthermore, economic circumstances altered not only the ideology behind the construction of the Cuban health care system, but the discourse on Cuban health care as well. The discourse on non-biomedical health care practices dramatically shifted from something for the Cuban government to prohibit in its early campaign toward medical modernity to something to aspire toward and embrace. This was dramatically illustrated in President Raúl Castro's 2009 statement: 'Traditional and natural medicine is not a necessity of poverty; it is an option of richness.'¹⁶⁵ A depiction that is markedly reminiscent of Mao's reference to Chinese medicine as a national treasure more than fifty years earlier. Once more, a local non-biomedical system is being constructed as a symbol for nationalistic pride in representing cultural genius and ingenuity in the face of a dominant politico-economic power associated with a superior universal science.

The focus on preventative medicine and comprehensive primary health care in the Cuban context also facilitated the incorporation of acupuncture's inherently similar ideological framework. Furthermore, in this particular socialist system, in which health care access and equity has been understood as a barometer for good governance and a constitutional right for all citizens, innovative, accessible, and cost-effective solutions were essential in a context where access to trade and medical resources were being severely challenged by

¹⁶⁵ Clausurado 2009.

international restrictions. Hence, the integration of acupuncture, amongst other non-biomedical health care practices, may be understood to have been an essential integration that was facilitated by political economic factors and rendered imperative in order for the Cuban health care system to continue to execute its constitutional responsibilities.

Contextualising the transfer, adoption, and integration of a non-biomedical health care practice such as acupuncture through a political economic lens provides an understanding of the dynamic changes that these practices continually undergo and how complex political and economic processes can ultimately impact health care systems.

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