

[BI]CYCLE URBANISM

LEARNING FROM BEIJING'S BICYCLE LIVELIHOODS

SHANNON BUFTON - FOUNDER, SMARTER THAN CAR

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THAN CAR



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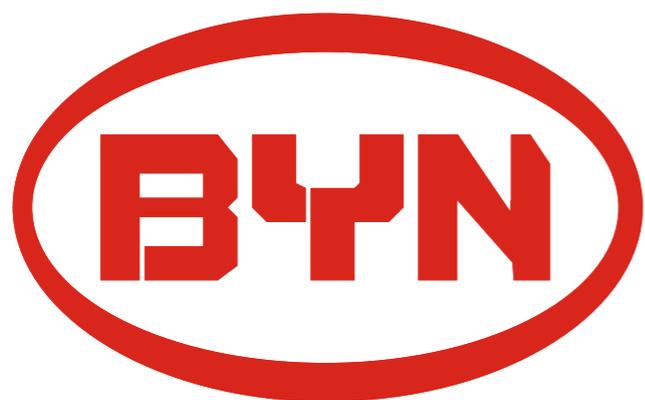
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BYD AUTO

Build Your Dreams





BYN CITY

Build Your Nightmare





CHINESE CITIES BECOMING LESS LIVEABLE THANKS TO CONGESTION, POLLUTION AND AIR PROBLEMS

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STC PROMOTES NEW BIKE CULTURE, UNDERTAKES URBAN RESEARCH, AND ORGANIZES EVENTS





RESEARCH ON BEIJING'S OLD BICYCLE CULTURE IS A FOCUS OF OUR RECENT EFFORTS

Pedal-based livelihood :

Self-propelled vehicles to organize and maintain everyday life by providing identity, economic opportunity and functional utility.

BF



BG



BH



BI



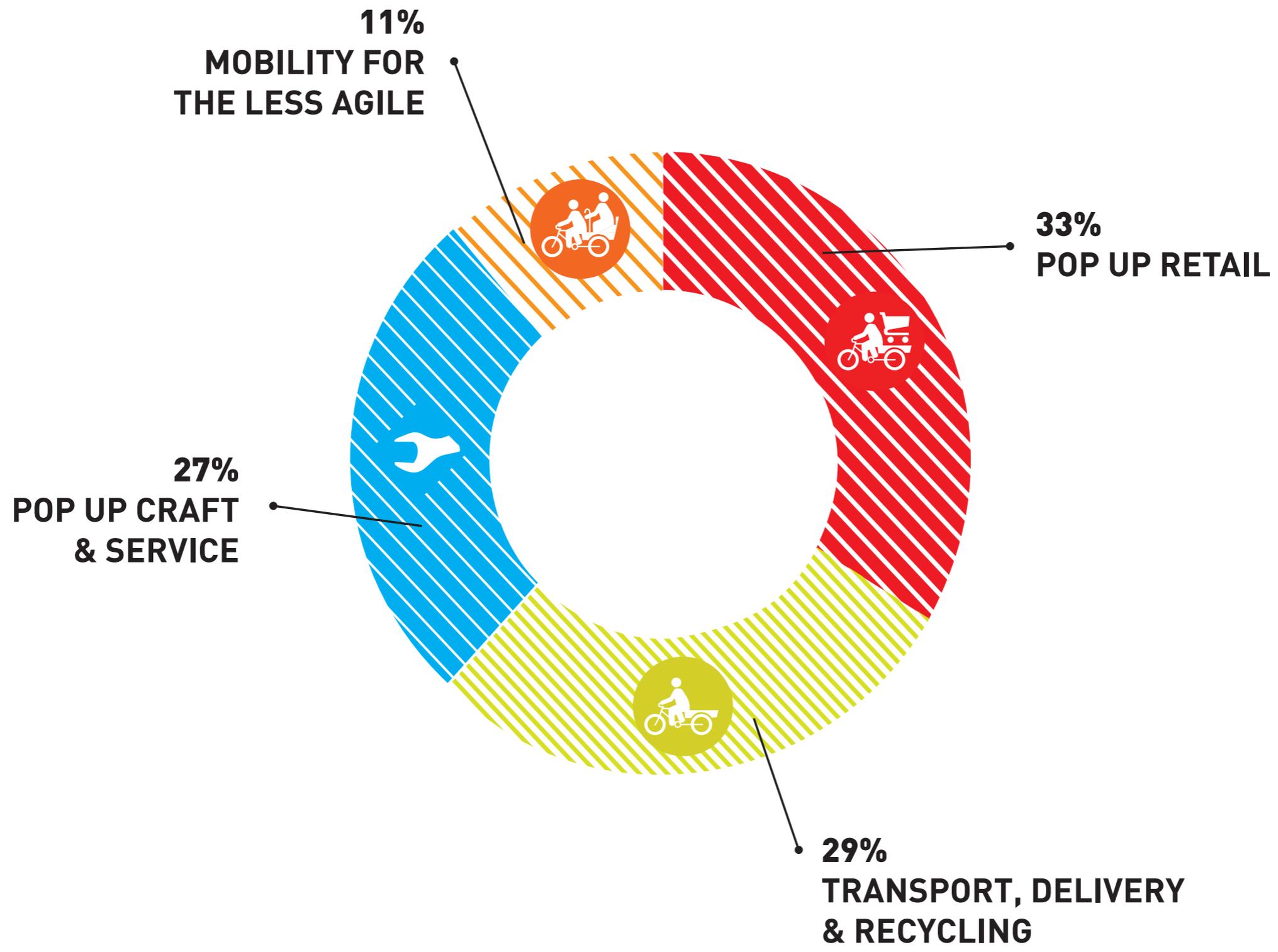
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BK



WE DOCUMENTED THE DIFFERENT WAYS [BI]CYCLES ARE USED IN THE OLD PART OF THE CITY





POP-UP RETAIL



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TRANSPORT, DELIVERY & RECYCLING



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POP-UP CRAFT & SERVICE





MOBILITY FOR THE LESS AGILE



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URBANISM BY INDIVIDUALS



FLEXIBILITY



BICYCLE LIVELIHOODS



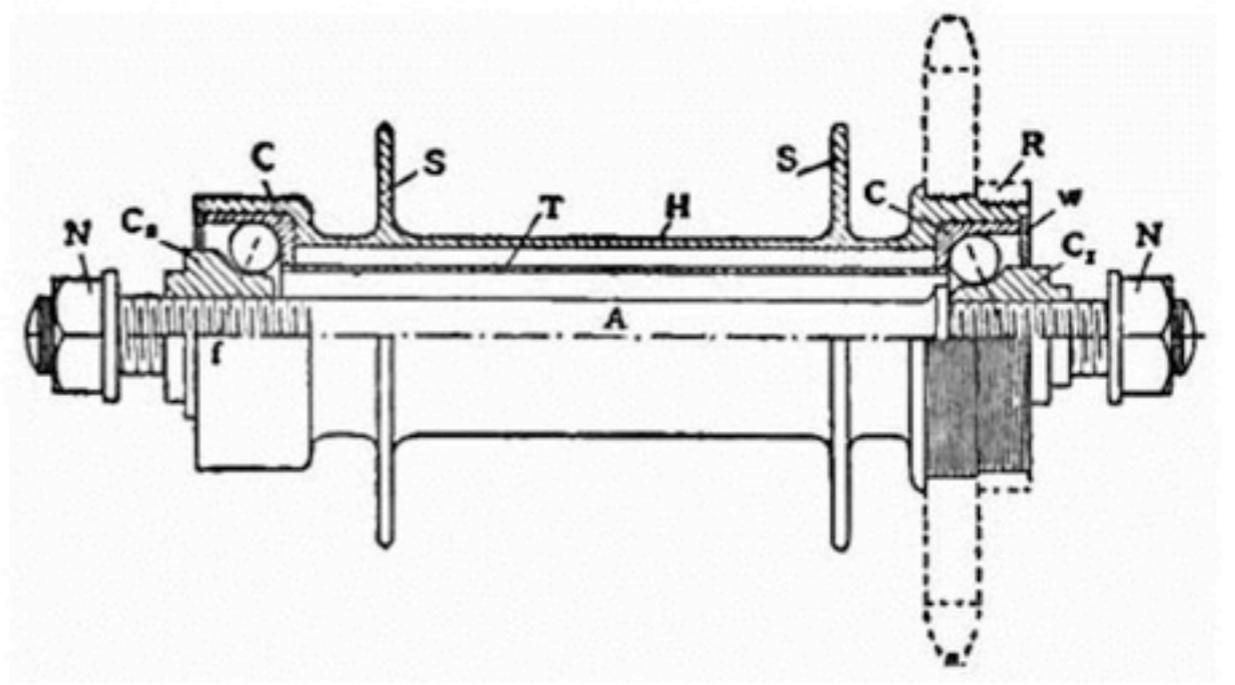
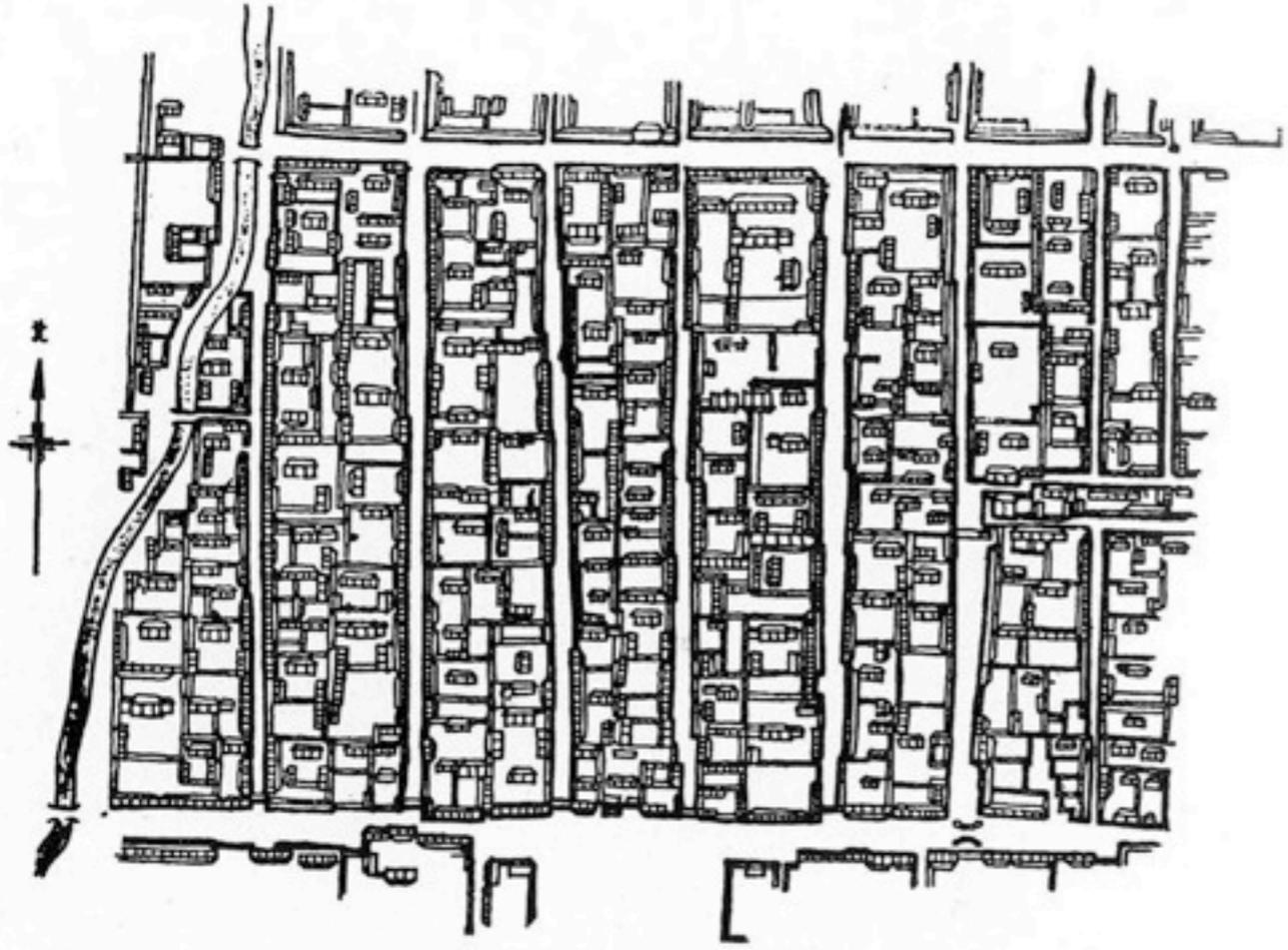
CLUSTERING



FLUID ACTIVITY ZONES



[BI]CYCLE URBANISM



(BI)CYCLE URBANISM

(Bi)cycle culture to provide personal mobility, urban functioning as well as social equity.

Analyzing, planning and maintaining urban environments with a priority focus on (bi)cycles.

Re-urbanization and re-appropriation of cities with (bi)cycles.

Squeezed by debt crisis, Greeks ditch cars for bikes

Wed, Aug 8 2012

By [Karolina Tagaris](#)

ATHENS (Reuters) - Greece's dire economic plight has forced thousands of businesses to close, thrown one in five out of work and eroded the living standards of millions. But for bicycle-maker Giorgos Vogiatzis, it's not all bad news.

The crisis has put cash-strapped Greeks on their bikes - once snubbed as a sign of poverty or just plain risky - and Greek manufacturers are shifting into fast gear.

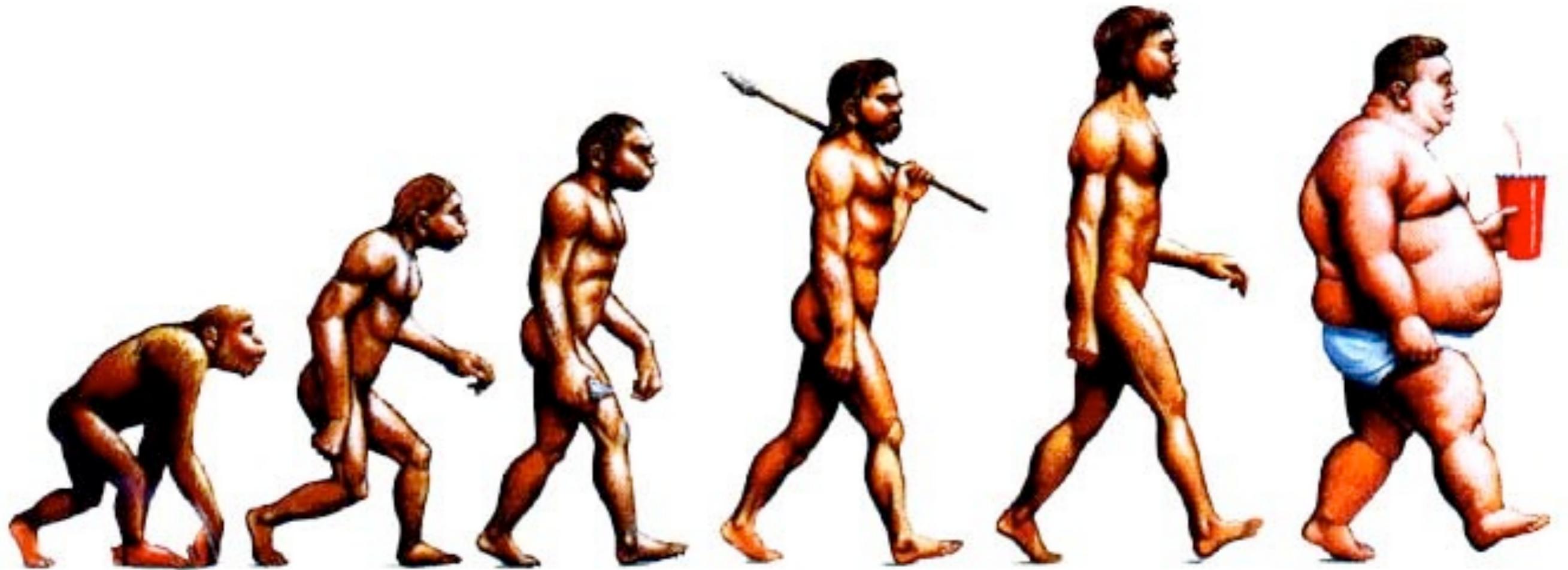
The high cost of road tax, fuel and repairs is forcing Greeks to ditch their cars in huge numbers. According to the government's statistics office, the number of cars on Greek roads declined by more than 40 percent in each of the last two years. Meanwhile, more than 200,000 bikes were sold in 2011, up about a quarter from the previous year.

Shops selling bicycles, and equipment ranging from helmets to knee pads, are spreading fast across the capital, popping up even between souvenir shops on the cobbled pedestrian streets of the touristy Plaka district.

"They're sprouting up like mushrooms," said Vogiatzis, who designs and builds tailor-made bicycles in his workshop on the Aegean island of Rhodes.

A former cyclist on Greece's national team, Vogiatzis opened his business in the mid-80s, combining his love for drawing and mathematics, but only recently watched sales boom from a modest 40 bikes a year to over 350.





Vehicle Energy Use in China

Cherry, Christopher R., Weinert, Jonathan X., Yang, Xinmiao, 2009. Comparative environmental impacts of electric bikes in China. *Transportation Research Part D* 14(5): 281–290.

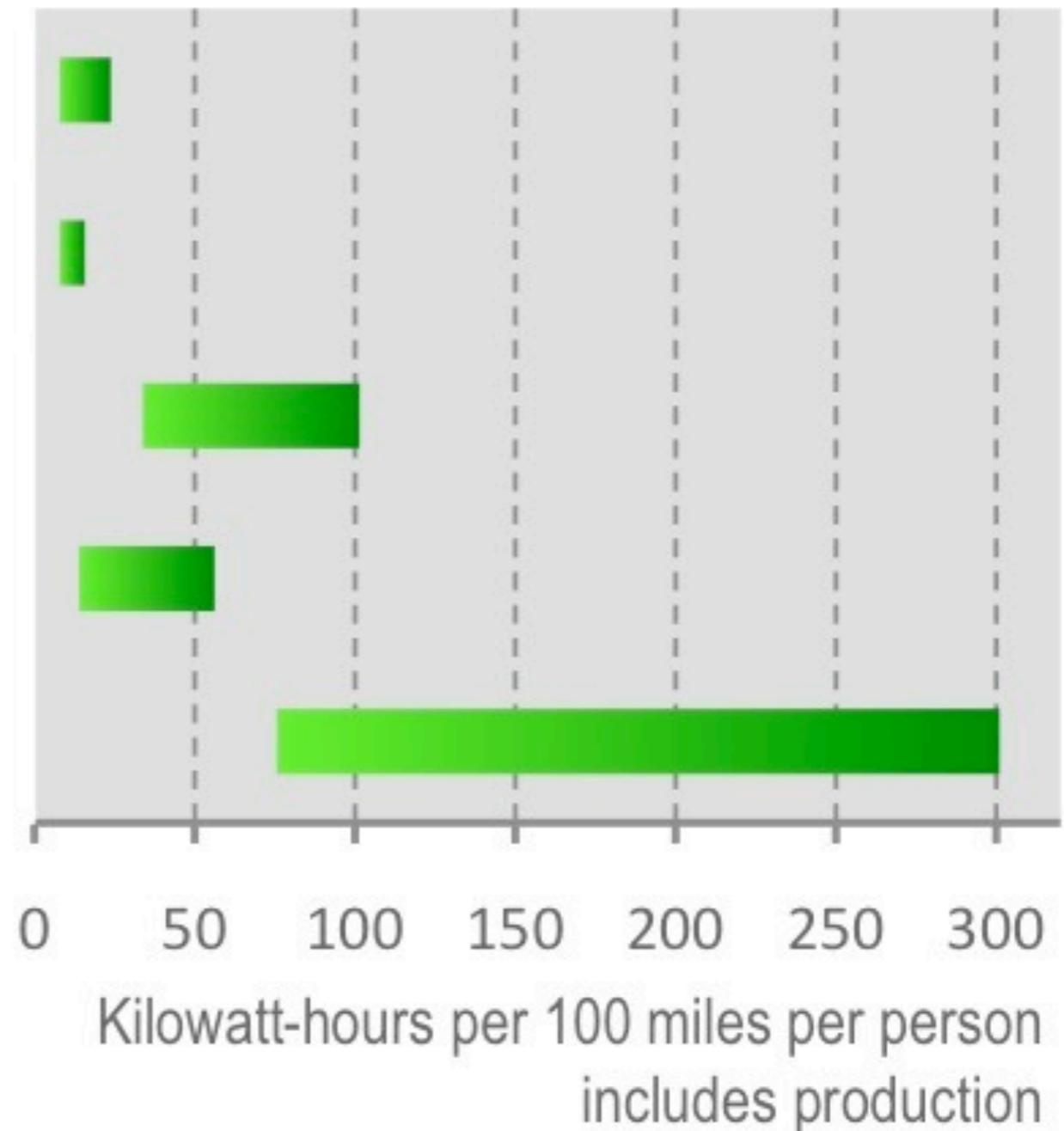
Electric bike (under 12.4 mph)

Bicycle

Motorcycle

Bus

Car (small 4-door sedan)



[BI]CYCLE URBANISM: HOW TO?



SELF-PROPELLED MOBILITY

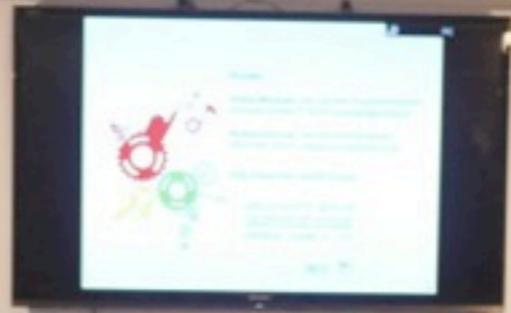
Transit versus Transport (Ivan Illich, 1978)
Convivial modernity

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RE-URBANIZATION

Re-appropriation & negotiation for urban space

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WHAT ABOUT CHINA ?

THE CHALLENGE FOR CHINESE CITIES



I'D RATHER BE CRYING IN THE BACK OF A BMW



**STIGMA ATTACHED TO THE BIKE. MOST CHINESE ARE
LOOKING FORWARD TO OWNING CARS.**



**DIFFICULT ENVIRONMENT FOR BIKE PROMOTION -
MORE THAN INFRASTRUCTURE REQUIRED**



RE-INVENTION OF BIKE CULTURE IS REQUIRED



RECREATIONAL CYCLING IS GROWING



欣盛·东方郡
焦点, 奇迹因你而创

到工区!



STEP 2. PROTECT AND PRIORITISE URBAN CYCLING



RE-INVENTION AND RE-IMAGINING
THE OLD CULTURE

RESEARCH AVAILABLE ONLINE :

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Beijing's pedal-based livelihoods as a muse for bicycle urbanism

Pedal-powered vehicles and cycling as a form of mobility are significantly enriching urban life in cityscapes worldwide. Organizing urban individual mobility by bicycle rather than car can alter the use of public space, thereby raising the quality of urban life (GEHL 2010). Such strategic use of (b)icycling to create livable and healthier cities is increasingly common in cities across the globe (GARDNER 2010) and among forward-thinking urban designers¹, policy makers or political entities² who often improve bicycle infrastructure and install bicycle supporting policies to augment urban cycling (PUCHER & BUEHLER 2008).

BY FLORIAN LORENZ & SHANNON BUFTON

From bicycle to urbanism

Yet, cycling can do more than improving urban mobility and health as pedal-powered vehicles are also means for cultural and artistic expression³, subcultural social interaction (FINCHAM 2007), economic opportunity and urban servicing (LORENZ & BUFTON 2011) which is reflected in geographically distinct bicycle cultures (PELZER 2010). In addition bicycles are complemented by tricycles and other pedal-powered vehicles which altogether offer a wide variety of mobility choices.

With such an array of meaning and functionality pedal-powered vehicles deserve to allow for the development of an approach to urbanism using pedal-powered vehicles as means of understanding, programming and developing urban form. We conceive sustainably functioning and culturally active urban landscapes animated by pedal-powered vehicles. For the process of creating such environments we propose the term bicycle urbanism⁴. Bicycle urbanism may offer novel approaches to re-imagi-

ne urban form along pedal-powered vehicles (STILGOE 2009) and create a city optimized for pedal-based mobility and culture.

For bicycle urbanism to rise in popularity innovative strategies promoting bicycle culture will be vital to shape positive perceptions towards a wider use of pedal-based vehicles. Here it may be helpful to learn from cultures where pedal-powered vehicles are deeply integrated in (urban) culture and used to organize a multitude of urban functions. We therefore suggest a bicycle cultural exchange for a reciprocal learning in terms of urban strategies related to pedal-based culture. To facilitate such a bicycle cultural exchange we are presenting research findings about the pedal-based culture in the Chinese city Beijing (and other cities). We anticipate that learning from Beijing's unique pedal-based culture can inspire strategies for bicycle urbanism in other geographical settings.

In this article we put forward that bicycle urbanism bears yet untapped potentials for policy

makers and urban designers to structure more dynamic cityscapes in a culturally, socially and environmentally sustainable way. Tapping into such potentials we show examples of how open space in Chinese cities is used in relation to pedal-based livelihoods and their importance for everyday life in Chinese cities. We conclude with strategies for a contemporary bicycle urbanism approach inspired by these examples.

A rapidly changing bicycle kingdom

The Kingdom of the Bicycle emerged after China's first five year plan of 1953 set the target to grow the Chinese bicycle industry by 60%, resulting in an annual production of more than a million bicycles by 1958 (MIKKOLAINEN 2007). From the 1950's through the late 1980's China was regarded as a global leader in non-motorized transport (RAHMAN 2006). In Chinese cities cycling was the predominant mode for individual mobility supported by a spatial mix of functions within walking

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Bicycle Lifestyles in Beijing and Their Relevance for a Benign Development of Future Cities.

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²Founder, Smarter Than Car, Beijing, China

Abstract

Incorporating bicycle lifestyles into design bears unused potentials for policy makers and urban designers to re-structure future cityscapes. In this paper we examine contemporary bicycle lifestyles in Beijing, China to show their role in creating urban livability by servicing urban communities in a culturally diverse, socially valuable and environmentally benign way. We present the results of on-site surveys obtained in and around Beijing's DongCheng district which investigated livelihoods organized around the bicycle. We present structural, social and economical traits for bicycle livelihoods with an emphasis on bicycle repair stations as an essential element of Beijing's bicycle culture. We discuss the bicycle's role as a catalyst for urban livability, flexibility of bicycle services, clustering of bicycle services within the cityscape, processes of urbanism by individuals, importance of bicycle infrastructure and contemporary erosion of the bicycle culture in Beijing. We conclude that bicycle-based retail and service needs to be supported by policy makers and urban designers in order to realize its full potential for benign urban development. We therefore put forward specific suggestions for both, policy makers and urban designers.

Keywords: Cultural exchange, Low-carbon mobility, Bicycle lifestyle, Urban livability, Cityscape

1. Introduction

Cycling is increasingly being promoted by urban designers and policy makers because of reasons such as traffic congestion, environmental conservation, health benefits and urban livability [1]. Urban design can effectively influence people's travel behaviors and demand for certain types of mobility [2]. A shift from motorized vehicles towards bicycles can significantly reduce the greenhouse gas (GHG) footprint of personal mobility [3] and in equal measure, counteract rising air pollution and GHG emissions. Lifestyles integrating pedal-powered mobility may therefore be called lifestyles of low-carbon intensity.

The development of a functioning bicycle infrastructure is cost-effective [4] due to an increase in population health [5]. A shift towards policies promoting bicycle use rather than car use can - on a city scale - alter the use of public space and raise the quality of urban life [6]. This was demonstrated in Copenhagen, Denmark, where urban development policies and endogenous dynamics within the cycling community created a city-specific bicycle culture, represented in cycling infrastructure, practices, policies, organizations and subcultures [7]. Investing in urban bicycle culture is

therefore a promising strategy to improve environmental performance, social life and cultural diversity in cities while at the same time engaging residents in a healthy amount of physical activity. Because of such benefits, city governments worldwide are nowadays increasingly supporting the use of bicycles [8].

This international trend is contrasted by the current erosion of bicycle culture in a previous 'bicycle heaven', the city of Beijing, China, where rapid urbanization is jeopardizing a once well functioning bicycle culture. Since the 1950's modernization of the City has been a high priority for the Beijing Government which was reflected in policies supporting the use of cars for personal mobility. In Beijing, bicycle use for transportation has been significantly shrinking with a drop from 58 to 38 % between 1986 and 2000 [3]. In 2006 cars surpassed bikes for the first time as most frequent mode of transportation in Beijing [9]. It is important to note that modal split of bicycle use in Beijing is with 38 % (figure for 2000) still comparable to the modal split of the European urban bicycle role-model Copenhagen, where 37 % of trips are undertaken on bikes [6]. Reasons for this still considerable bicycle use are that cycling is the most efficient and affordable mode of transport in Chinese cities which often accommodate cycling with flat topography and mild climate [10]. Currently, the conflict between tradition and modernization leaves Chinese bicycle culture at the crossroads where bicycle use may further diminish, stagnate or again grow.

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