Walking (a long way)
position paper CHI 2017 Outdoors

Alan Dix

HCI Centre

School of Computer Science

University of Birmingham

Birmingham, B15 2TT, UK

alan@hcibook.com

http://alandix.com/academic/papers/chi2017-outdoors/

http://alanawalks.wales/

Abstract
The author's one thousand walk around Wales in 2013 created a substantial open-science dataset that is of potential benefit to many working on the impact of outdoor activities and health. It also gave rise to observational data that highlights some of the barriers to exercise for those who often most need it, and especially some of the socio-economic hurdles.

Keywords
Walking, mobile technology, tourism, social exclusion, bio-sensing, health and well-being.

Introduction
Just over four years ago, on 18th April 2013, I set out on a thousand mile walk around the periphery of Wales. Although there are few people who have followed the entire route as a single walk, it followed way-marked long-distance footpaths. Unlike the long distance paths of the United States such as the Appalachian Trail or Pacific Crest Trail, UK long-distance paths are relatively close to or pass through population centres, and typically include a mixture of long-distance walkers engaged in multi-day or multi-week hikes, and more casual day hikers or afternoon walkers.

In particular the Wales Coast Path (approx. 870 miles) was opened in 2012 targeted at increasing tourism and

Guerrilla Art near Penmaenmawr
http://alanwalks.wales/2013/05/16/
day-29-conwy-to-llanfairfechan/

Remnants of 19th Century
industry at Port Wen, Anglesey
http://alanwalks.wales/2013/05/20/
day-33-amlwch-to-cemaes/

Barry Island, economically
depressed but brightly coloured
http://alanwalks.wales/2013/07/25/
day-99-llantwit-major-to-barry/

encouraging outdoor pursuits. Inactivity and obesity are increasing problems so making outdoor recreation easy and attractive is a core public health priority; walking is known to be a major help in both physical and mental health, as well as simply fun. Furthermore tourism is critical to the local economy of many of the areas through which the path passes.

Methodologically the walk combined forms of action research, experimental technology, auto-ethnography and critical observation. I had personal research goals including the effects of poor connectivity and IT issues for rural and marginal areas. In addition, I declared myself a 'living lab' for other researchers: took part in various experiments, was instrumented with bio-sensors, and tuned my observation for certain 'concerns' such as 'off path destinations'. Of particular relevance to this workshop are two kinds of outcome.

First are the more qualitative and anecdotal outcomes based on individual conversations and observations. This includes socio-economic barriers to exercise, especially equipment costs as the fitness area has become more fashionable. It also includes barriers to family and recreational walking such as confidence that paths will be easily walkable (memories of chest-high bramble thorns!). However, the opportunities are significant: conversations with those rehabilitating from drugs, alcohol, and prison emphasised the positive impact of the natural environment.

Second are the more quantitative and systematic data sets including bio-sensor and accelerometer data, GPS traces, 19,000 photographs, audio recordings and more than 150,000 words of blogs. Of particular note, the bio- data includes 60 days and 30 nights of medical grade ECG trace, the largest such dataset in the public domain. All of the data is freely available as an open science resource and it is being used in a number of projects across the world including the "Technology on the Trail" initiative at Virginia Tech.

Acknowledgements

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