Living in megacities - A new focus in English linguistics

How are metropolises worldwide developing? And what do their residents say about it? Linguist Carolin Biewer from the University of Würzburg aims to investigate this question together with the German Aerospace Center – and is funded with EUR 900,000.

Where do we want to live? In the countryside? Or rather in the city? The past centuries have shown that cities continue to grow – some into vast megacities with millions of inhabitants. Carolin Biewer wants to find out how people construct and perceive their living space in such a city. She holds the Chair of English Linguistics at the University of Würzburg (JMU) and is funded for her endeavour by the Volkswagen Foundation as part of the "Momentum – Funding for Recently Tenured Professors"-initiative.

From September onwards, Carolin Biewer will be able to promote the reorientation of her department with more than EUR 900,000 at her disposal. Her goal is to address questions about the usage, perception, organisation and evaluation of space by integrating theories and methods of English linguistics with those of remote sensing from geography. With this, she aims to arrive at a better understanding of the complexity of such spaces as large cities. For the analysis of large amounts of data, methods from the areas of artificial intelligence and digital humanities will be used. The research endeavour is titled: "A New Focus in English Linguistics: Geolingual Studies".

Megacities and how they are perceived

Remote sensing and artificial intelligence enable the identification of building types and building density of a city district on the basis of satellite data. These also show how cities grow and change, or which parts of the city are at a risk of landslides or flooding. Night scene photographs provide information about light emissions and reveal which areas are densely populated.

But these data alone do not show to which social networks the people living in these areas belong, how they construct their urban identity, how they deal with problems, such as housing shortage and air pollution, and how they perceive their city. To this, Carolin Biewer offers a new approach: "Supplementary communication data enables us to get a clear picture of how people feel about their living space and how they shape it."

This is precisely what Biewer and her team seek to investigate, especially in so-called megacities. For this purpose, she will look at different communication channels. Besides newspaper data and interviews, Twitter constitutes a well-known example. The social networking service offers the research team the possibility to collect large amounts of anonymised data and to linguistically analyse which topics and places in the city are mentioned and which emotions are expressed.

The aim is to find out how people shape their environment, how they perceive it and how they comment on it. For example, do Londoners talk more about city parks than gyms in their neighbourhood in times of the global Covid-19
pandemic? Are they frustrated, annoyed or rather frightened by a lockdown? And what about the people in Hong Kong? Are they more concerned about the housing shortage or the impact of the political situation in their city? Which changes in their neighbourhoods do urban dwellers worry about? And what do they consider an improvement of their quality of life?

The cities of the future

"Ultimately, the central question is: How do we want to live?," Biewer says. She feels that the global discussion about how people want to shape their cities in the future and what challenges they will have to face is neglected. She therefore deems her approach highly useful for urban planning. "The humanities can contribute considerably to resolving issues such as these which are relevant to society. We should tap into this potential."

In addition to specifying the department's profile, the JMU team aims to establish an international research cooperation in order to jointly develop research methods for megacities in different regions of the world and to be able to compare study results. Which locations will play a crucial role? London and Hong Kong are already set. New York, Tokyo, Mexico City, Bogota, Moscow, Istanbul or Delhi are further interesting objects of study for Carolin Biewer. The German Aerospace Center (DLR) together with the Department of Remote Sensing at the Institute of Geography and Geology at JMU are central partners in the implementation of geolingual studies. Carolin Biewer has teamed up with PD Dr. Hannes Taubenböck, head of the "City and Society" team at the DLR and a lecturer at the University of Würzburg.

In addition to research, a master's degree program in Geolingual Studies is to be established at the University of Würzburg. It will address students of English linguistics and geography and channel the research activities into a hands-on study programme that provides graduates with a wide range of career prospects, for example in urban planning and global citizenship education.

The Momentum initiative

The "Momentum" initiative of the Volkswagen Foundation supports recently tenured professors, such as Carolin Biewer. According to the foundation, the goal is to open up opportunities for them to further the thematic and strategic development of their first tenured professorship. Out of the 70 proposals submitted from all over Germany, nine concepts have been selected for funding, four of them in the humanities.

wissenschaftliche Ansprechpartner:
Prof. Dr. Carolin Biewer, Department of English Linguistics, University of Würzburg, Phone +49 931 31 80224, carolin.biewer@uni-wuerzburg.de
The satellite images of London and Hong Kong were processed by the DLR and show examples of Twitter data from the two cities which are locally relevant and refer to coronavirus.

DLR