MULTIVERSITÉS CRÉATIVES

3 MAY – 6 AUGUST 2012

Multiversité: This portmanteau word formed from the prefix "multi" and the noun "diversité" (or "diversity"), expresses the notion of creative universes that are both multiple and in transformation. The 15 projects featured have been specially designed and produced for this exhibition, which is the first for the museum's *service de Prospective industrielle* (Industrial Prospective Department), formed in 2010. At the crossroads of several different disciplines–architecture, design, new technologies and social innovation–industrial forecasting throws light not only on the form of contemporary design, but on emerging issues within it as well.

Generating: The exhibition's first section gathers together the work of five researchers working in architecture and design. Their model of design and innovation is "computational," in that it makes use of the new calculation possibilities offered by computer technology.

Making: In the second section of the exhibition, we leave the research labs and the state-of-the-art companies that use them and travel to more unexpected territory. Whether they're working in the Moroccan desert, a Fab Lab* in Benin, or a company in the Paris area, designers are transforming and reappropriating how objects are made. Their investigations blend materials and technologies that are both low tech* and high tech*, free, open source*, and sustainable.

Representing: In the third and final section of the exhibition, the visitor is invited to manipulate Internet data by visualizing it graphically. Such a dizzying increase in information opens up the possibility of new practices of knowledge and representation.

*Glossary p 4

Centre Pompidou

1. GENERATING

Aided by the sheer calculating power of the latest computers, certain contemporary architects and designers no longer build using parametric software*. Rather, they create a piece of work using algorithms* and scripts*, getting their inspiration from morphogenetic processes, living organisms, encoded by DNA. As practitioners of emergent knowledge, these innovators use a biological or even a geological vocabulary, inviting the visitor to observe this new world in all its strangeness.

In collaboration with Dr. Craig Carter, Professor of Materials Science and Engineering at MIT*, Joe Hicklin of Mathworks*, James C. Weaver (Wyss Institute, Harvard University) and the company Objet, **Neri Oxman** explores the *Book of Imaginary Beings* by Argentinian poet Jorge Luis Borges. She interprets its fantastical descriptions using 18 prospective prototypes.

Working in collaboration with Steffen Reichert, **Achim Menges'** contribution is "HygroScope, Meteorosensitive morphology," where the algorithm*-generated movement of the wooden elements is reminiscent of sea anemones or radiolaria, those floating predators sketched by the explorer Ernst Haeckel (1834-1919) upon his return from a scientific expedition. **Andrew Kudless/Matsys** is inspired by the limestone sedimentation on barnacles, simultaneously hermaphrodite crustaceans that live in dense aggregates. **BIOTHING_Alisa Andrasek** got her inspiration from the limestone cliffs on the southwest coast of Taiwan. Through their observation of the living world, these designers have deduced that it is not composition that generates architectural form but rather the dynamic processes within which different structural, performative, and material elements are at work. Their approach consists neither of imitating nor transforming nature, but rather of providing a calculated response to it. The design of this response evokes that of biological and metabolic circuits. The aggregates become staggering, the scale immoderate, the repetitions infinite. This poetics of dynamic growth is now influencing the creative process in architecture and design, making completely new architectural applications possible. One such example is **EZCT Architecture & Design Research**'s experiment with Lafarge's fibre-reinforced concrete, Ductal®, which has the architect predicting a new conception of construction, in which traditional building plans and sections are replaced by codes.

2. MAKING

In a contemporary world that is both globalized and marked by economic, industrial, and cultural breakdown, manufacturing allows for the pooling and sharing of knowledge. Since the initial 2004 Fab Lab, physical prototypes created with 3D design software have been manufactured quickly. The Centre Pompidou is pursuing an ambitious policy to commission work by architects and designers. The museum has piloted a designer-in-residence programme within a Fab Lab, thanks to the support of Marie-Christine and Lionel Zinsou for the Fondation Zinsou. It was in the context of this programme that the designer **Kossi Aguessy** spent February 2012 at the Songhaï Centre in Porto Novo, Benin. The centre, which was founded by Father Godfrey Nzamujo, who holds doctoral degrees in Electrical Engineering, Microbiology, and Development Sciences, has been recognized as a regional African Center of Excellency by the United Nations. It is a hub for resources, services, and research, and has the workshops and scientific and technical personnel to make the Fab Lab a permanent fixture. Two research projects that bring resources into play are part of this exhibition: the designer **Markus Kayser** uses sun and sand to create his pieces, while **François Brument/In-Flexions** uses rapid prototyping to investigate the manufacturing cycle of objects. The technology that enables the laser sintering of polyamide powder has a positive environmental image, but it actually wastes a lot of materials. The designer capitalizes on the warping and deformations of a recycled powder that has been altered by laser technology to create an original series of objects.

3. REPRESENTING

As an introduction to this third section, **Casey Reas** has created a hypnotic visual space that interrogates the creative process. His *Process 13 Diptych* reveals behaviours that are repeated from generation to generation, dictated by a programme. The other works in this section take the Internet, websites, databases, documents, messages, images, tweets (in other words, voluminous everyday collections of information) as the primary materials of the creative process. This new interactive graphic environment plays with scale, aggregates or dilates vision, inverts established relationships, and paradoxically creates a whole that is smaller than its component parts. The wallpaper printed at the exhibition's opening, then, will reveal the *Ecosystem of the Multiversités créatives exhibition* in April 2012. The exhibition's other map, created by **Linkfluence/Antonin Rohmer**, represents all the communities of the French web. These communities exist on a huge number of sites (online media, blogs, forums, personal webpages) started by people who are passionate about a particular subject, and who publish articles and exchange points of view and links there. **Bestiario** uses the open data from the website ParisData, which is both open to all and reusable by anyone, to represent the frequency of the first names of newborn Parisians on a color-coded horizontal visualization. A device created by the collective **LUSTlab** with **Pieke Bergmans** makes two lamps the actors in an Internet of objects. They communicate with one another, reacting independently or in concert with the data they are fed via tweets, Facebook messages, Flickr images, and YouTube videos. Neither the data nor the information posted still belongs to the users who posted them, but rather is the property of the various media networks. The Internet objects' connectivity, particularly to social networks, gives them autonomy, and grants them the ability to differentiate amongst themselves, compare themselves to one another, and transform themselves. A little further into the exhibition, a workstation invites visitors to explore an Internet monitoring platform. It was specially developed with **iScope**'s **Keywatch** software, which the Industrial Industrial Prospective Department uses in its exploration of digital networks.

Finally, the **Médialab of Sciences Po** provides an example of how art history research can address the methodological challenges of data and data processing. Their dynamic digital archive goes far beyond the traditional artist's catalogue: it also describes and visualizes not only the artist's thought processes, but the controversies and debates he or she inspires.

EXHIBITION

CURATOR
Valérie Guillaume
Assisted by Hélène Ducaté

FAB LAB CURATORS AT THE SONGHAÏ CENTRE, PORTO NOVO, BENIN
Valérie Guillaume and Cloé Pitiot

INTERNET MONITORING PLATFORM
Valérie Guillaume, Odile Rousseau, Anne-Marie Zucchelli
and Hélène Ducaté

ARCHITECT
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PRODUCTION MANAGER, FAB LAB
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With the support of

and Marie-Christine and Lionel Zinsou for the Fondation Zinsou

INFORMATION

01 44 78 12 33
www.centrepompidou.fr

EXHIBITION OPEN TO THE PUBLIC
From 3 May to 6 August 2012
Espace 315, level 1
Every day except Tuesdays from 11am to 9pm
Ticket desks close at 8pm

ADMISSION
Access with the 'Museum & Exhibitions' ticket
Valid the same day for one admission to all Exhibition areas, Museum and panoramic viewing point.
€13, concessions €10
Free with the Annual Pass and for under-18s

Buying tickets online and print at home
(full price only)
www.centrepompidou.fr/billetterie

TWITTER
Find information and content on the exhibition via Twitter with the hashtag #Multiversités, or by going to http://www.twitter.com/centrepompidou

Graphic design
c-album

Printing
Friedling Graphique, Rixheim, 2012

GLOSSARY

Algorithme : The set of rules to be followed in a calculation or computer processing operation.
Fab Lab: Contraction of Fabrication Laboratory. These are digital fabrication workshops that bring together designers, engineers, computer scientists and general enthusiasts. These workshops have to respect MIT's The Fab Charter.
Laser sintering of polyamide powder: Thermal laser treatment that fuses together particles of polyamide powder.
Parametric software: Enables the definition of easily modifiable parameters.
Low tech: Can be literally translated as poor technology, as opposed to high tech. Describes the simple, economical use of contemporary tools, machines and techniques.
MathWorks: Scientific and technical computing software editor founded in 1984.
MIT: Massachusetts Institute of Technology. This North American university and research institute is one of the largest and most important in the world.
Morphogenetic: Relating to morphogenesis, or the development of the shape and structure that characterizes a living species.
Open source: Said of computer software that allows anyone to access the source code (the computer programme forming its base).
Prototyping: The manufacturing of a prototype.
Script: In information technology, a script is a set of commands or pre-established codes that enables both simple and complex operations to be carried out.