Design of nontraditional street furniture sitting element

Vladimír Haltof
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PART ONE - ANALYSIS
CATEGORIES OF STREET FURNITURE SITTING ELEMENTS

• **Common elements** - characterized by offering options and type lines (bench with backrest, no backrest, different color or material type). The priority is value of element.

• **Original elements** - usually conceived of objects individually focused on the visual aspect that can be categorized as:
  - Sculptural elements and environmental objects
  - Nontraditional materials or design solutions
  - Elements that combine multiple functions

• **Competetion designs, visions, temporary installations, original designs**
Common elements

- Radium, steel, wood
  By: David Karásek, Radek Hegmon

- Radium, steel, plastic
  By: David Karásek, Radek Hegmon

- Radium, steel
  By: David Karásek, Radek Hegmon

- NeoRomantico, aluminium
  By: Miguel Milá

- NeoRomantico, aluminium, wood
  By: Miguel Milá

- NeoRomantico, steel, wood
  By: Miguel Milá

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Nontraditional materials or design solutions

- Fingerlo, steel, plastic
  - Mitzi Bollani
- Rio, liquid stone (UHPC)
  - Andre Lompret
- 105, cast stone
  - Enric Batlle, Joan Roig
- Blow up, cast stone
  - Mansilla + Tuñón
- Trapezo, steel, wood
  - Antonio Montes, Montse Periel
- BdLove Bench, polyethylene
  - Ross Lovegrove
- G Banco / G Silla, steel, wood
  - A. Arriola & C. Fiol
- Bagdad Café, Corten
  - Hello Pinón
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Elements that combine multiple functions

- **Hydra, cast stone**
  - Angels Colom

- **Woody, steel, wood**
  - David Karásek, Radek Hegmon

- **INTEGRAL, steel, wood**
  - Ondřej Elfmark

- **STRIP EASE, steel**
  - Lana+Savetiere

- **Round-B, steel, wood**
  - Mv Design

- **Gadot, cast stone**
  - diezydiez diseño

- **Sinus, steel**
  - Roman Vrtiška

- **Traslus, steel, wood**
  - Francisco J. Mangado

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Sculptural elements and environmental objects

Flor, beton
Mansilla + Tuñón

Boomerang, beton
Antela&Fiol, arquitectes

Naguisa, beton
Toyo Ito

Xurret System, cast stone
Inaki Abalos i Juan Herreros

Slope, cast stone
Pich-Aguilera, arquitectes

[K-BENCH], polypropylene
Charles Kaisin

Muscle, steel
Alexandre Moronoz

Urban Adapter: wood, steel
rocker-lange architects
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Competetion designs, visions, temporary installations, original designs

City Lounge, St. Gallen
Carlos Martinez, Pipiltiti Rist

TOČ-MÉ-TOČ
Jaroslav Jerhot

Městské odpočívadlo
Štěpán Eliaš & Josef Hajný

Snake
Roman Vrtiška

Astral Benches ver. 2
Astral media outdoor

Pedestrian Zone Anděl, Praha
D3A architekti

Horní náměstí v Olomouci
HŠÍ architekti

Jiřské náměstí v Praze
HŠÍ architekti

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PART TWO – SELECTED PROBLEMS
ANTI-ERGONOMICS

Public space has its own specifics due to the anonymity of its users, therefore it is necessary that the elements of street furniture have been designed with certain characteristics that are inconsistent with the ergonomics.

Aim:

• Restrictions on the use of elements for purposes other than designed.

• Restrictions on transfer element or stealing protection.
ANTI-ERGONOMICS

Restrictions on the use of elements for purposes other than designed

**DESIGNER**
- Special construction in the element
- Sitting surface
- Size/length of the element
- Geometry of the element

**ARCHITECT**
- Selection of the element type
- Element location
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ANTI-ERGONOMICS

Special construction in the element
ANTI-ERGONOMICS

Sitting surface
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ANTI-ERGONOMICS

Size/length of the element
ANTII-ERGONOMIE

Geometry of the element

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ANTI-ERGONOMICS

Restrictions on transfer element or stealing protection

DESIGNER

• Weight and geometry of element
• System of element anchoring

ARCHITECT

• Element location
• Selecting the element type
• Quality of element anchoring
ANTI-ERGONOMIE

Restrictions on transfer element or stealing protection

• Weight and geometry of element
ANTI-ERGONOMICS

Restrictions on transfer element or stealing protection

• System of element anchoring
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PART THREE POINT FIVE – TURN-OFF
STABILITY ELEMENT

**Types of elements by stability:**

1) The element is sufficiently stable and fixed, so no need to further anchoring.

2) The element is stable, but not sufficiently to handling. The anchoring is necessary due to fixation of its position.

3) The element itself is not stable or is unstable under load, so it must be anchored to ensure its stability and load resulted from use.
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COMMON USED ANCHORING OF STREET FURNITURE

No anchoring
+ Free space
- Vandalism
COMMON USED ANCHORING OF STREET FURNITURE

Anchoring into the pavement

+ Cheap
+ Easy
+ Does not affect the underground

- According to the type of pavement might be less stable
COMMON USED ANCHORING OF STREET FURNITURE

Anchoring to the basement

It is required for elements that create bending momentum in anchoring place.

+ Very robust, stable
- Interferes with the subsoil
- Expensive
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PART THREE - CONCLUSION
DEFINITION OF THE OWN DESIGN ELEMENT

- Modern design in compliance with the tectonics of individual components.
- Use (for this type of element) of innovative structural design and materials to distinguish elements of normal production and indicates possible future trends.
- A combination of two functions that are normally provided by a variety of street furniture elements while still exists sitting used as a single function.
- Targeted use of anti-ergonomic principles to reduce the use of unwanted element.
- Design of innovative "system" solution for anchoring element, which will eliminate the disadvantages of commonly used solutions.
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PART FOUR - SOLUTIONS
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Thank you for your attention.