

TEXTO 1**URBAN SUSTAINABILITY AND RESILIENCE**

Buildings are likely to have been among the first regulated entities in the world. In ancient Babylonia, King Hammurabi (c. 1750 BC) had a clear vision on the constructions of buildings. His set of 284 laws, known as the Code Hammurabi, is regarded as the one of the oldest preserved sets of direct regulatory interventions in the world. The code sets, among others, rules regarding a builder's duties and responsibilities towards his client: 'If a builder builds a house for some one, and does not construct it properly, and the house which he built falls and kills its owner, then that builder shall be put to death' (King, 2004, p.21).

It was not until the migration of populations into cities that city builders started to think seriously about housing. Cities, such as Amsterdam in the Netherlands and London in the United Kingdom, were evolving rapidly as their economic progress attracted many prospective citizens. In those days, houses in cities were often built in a similar way as houses in the countryside, with timber and straw. Yet, such houses in great numbers caused a major fire risk, that is, a human-made hazard to which such cities were unlikely to be resilient. And indeed, devastating fires such as the 1452 Amsterdam fire and the 1666 Great Fire of London almost fully destroyed these cities. Both fires sparked governments to draw up far-reaching building and zone regulations.

Directly after the 1452 fire the Amsterdam city government decreed that from then on houses had to be built of bricks instead of wood and that thatched roofs had to be replaced by tile roofs. This was an unprecedented governmental intervention (Breen, 1908). And, directly after the 1666 fire, the Rebuilding of London Act 1667 was passed, which also spells out that buildings from then on had to be built of brick because 'in regard the building with Bricke is not onely more comely and durable but alsoe more safe against future perills of Fire' (Charles II, 1667 [1819], section V) – which may very well be one of the first references to urban resilience.

Today, governments seek to control many more aspects of buildings, from structural and fire safety to the prevention of disability discrimination and environmental and resource sustainability. They may approach this in different ways. One is through direct regulatory interventions such as making the use of certain polluting building materials unlawful, subsidizing the installment of solar panels on existing buildings or reducing the land tax for buildings with high levels of environmental performance. It is clear that choosing the right governance tool matters if effective outcomes are to be achieved (Baldwin et al., 2011; Stewart, 2006). But which is the right tool for governments in what settings?

The classic regulatory governance tool, and perhaps most used in governing buildings and urban environments, are statutory regulations. An example is building regulations that set requirements to the structural safety of a building. Such requirements are often expressed in standards that seek to

steer behaviour in such a way that harmful results are prevented or that a specific outcome is achieved. At least three types of standards may be distinguished (Baldwin et al., 2011): prescriptive standards, performance-based standards, and target or goal-oriented standards.

Prescriptive standards seek to prevent harmful events, for instance, the collapsing of a building, by stating the exact requirements for the particular parts of a building, its construction or even its design process have to meet. Typically prescriptive building regulations set standards to the loadings for buildings, for instance, how much load a floor should be able to hold, to the structural use of concrete or other building materials, or to the process of calculating its structural safety. An example is: “no floor enclosed by structural walls on all sides exceeds 70m² (HM Government, 2010, p. 18).

Performance-based standards specify the performance of a good or service, but do not specify how that performance is to be achieved. Such standards are normally considered to give those regulated an incentive to find a solution that is both effective in terms of meeting the standard and efficient in terms of costs (May, 2003; Meacham et al., 2005).

Finally, target or goal-oriented standards seek to prevent harmful events by directly linking the behaviour of individuals, goods or services to the regulatory goal. They leave it fully to those regulated as how to achieve compliance with these standards.

Given governments’ decades (to centuries) of experience with direct regulatory interventions it may be expected that there is sufficient institutional capital, especially in developing economies, to address urban sustainability and resilience through this mode of government to a certain extent. Introducing statutory regulation for urban sustainability is a powerful tool (Shapiro, 2009) and often suggested as one of the most important tools in achieving an environmentally sustainable built environment (UNEP, 2006).

Fonte: Adaptado de: Heijden, Jeroen v.d. **Governance for Urban Sustainability and Resilience: Responding to Climate Change and the Relevance of the Built Environment.** Cheltenham, U.K.: Edward Elgar Publishing, 2014, p. 31-4.

TEXTO 2

APPLIED ARTS AND FINE ARTS

Although we now tend to refer to the various crafts according to the materials used to construct **them**—clay, glass, wood, fiber, and metal—it was once common to think of crafts in terms of function, which led to **their being** known as the “applied arts.” Approaching crafts from the point of view of function, we can divide **them** into simple categories: containers, shelters and supports. There is no way around the fact that containers, shelters, and supports must be functional. The applied arts are **thus** bound by the laws of physics, which pertain to both the materials used in **their making** and the

substances and things to be contained, supported, and sheltered. These laws are universal in their application, **regardless of** cultural beliefs, geography, or climate. If a pot has no bottom or has large openings in its sides, it could hardly be considered a container in any traditional sense. Since the laws of physics, not some arbitrary decision, have determined the general form of applied-art objects, they follow basic patterns, so much so that functional forms can vary only within certain limits. Buildings without roofs, for example, are unusual because they depart from the norm. However, not all functional objects are exactly alike; that is why we recognize a Shang Dynasty vase as being different from an Inca vase. What varies is not the basic form but the incidental details that do not obstruct the object's primary function.

Sensitivity to physical laws is **thus** an important consideration for the maker of applied-art objects. It is often taken for granted that this is also true for the maker of fine-art objects. This assumption misses a significant difference between the two disciplines. Fine-art objects are not constrained by the laws of physics in the same way that applied-art objects are. Because **their primary purpose** is not functional, they are only limited in terms of the materials used to make them. Sculptures must, for example, be stable, which requires an understanding of the properties of mass, weight distribution, and stress. Paintings must have rigid stretchers so that the canvas will be taut, and the paint must not deteriorate, crack, or discolor. **These are problems that must be overcome by the artist because they tend to intrude upon his or her conception of the work.** For example, in the early Italian Renaissance, bronze statues of horses with a raised foreleg usually had a cannonball under that hoof. This was done because the cannonball was needed to support the weight of the leg. In other words, the demands of the laws of physics, not the sculptor's aesthetic intentions, placed the ball there. That this device was a necessary structural compromise is clear from the fact that the cannonball quickly disappeared when sculptors learned how to strengthen the internal structure of a statue with iron braces (iron being much stronger than bronze).

Even though the fine arts in the twentieth century often treat materials in new ways, the basic difference in attitude of artists in relation to their materials in the fine arts and the applied arts remains relatively constant. It would therefore not be too great an exaggeration to say that practitioners of the fine arts work to overcome the limitations of their materials, whereas those engaged in the applied arts work in concert with their materials.

Fonte: The Official Guide to the TOEFL Test. Fourth Edition. U.S.A.: ETS. The McGraw Hill Companies, 2012, p. 51-2.

QUESTÕES

As questões de 1 a 5 referem-se ao TEXTO 1:

1) O objetivo principal do autor ao citar o Código de Hamurabi é

- (A) reforçar a necessidade de penalidades mais duras em casos de desrespeito às leis de defesa da proteção civil.
- (B) ilustrar a fragilidade das 284 leis que regravam as edificações à época do Rei Hamurabi.
- (C) ressaltar a importância da intervenção estatal e da responsabilização jurídica pela propriedade, previstas por leis de proteção civil.
- (D) resgatar medidas punitivas relacionadas à área habitacional, previstas nas 284 leis do Código.

2) Os relatos sobre as cidades de Amsterdã, na Holanda, e Londres, na Inglaterra, nos séculos XV e XVII, respectivamente, confirmam que

- (A) o rápido desenvolvimento econômico tornou-as mais resilientes.
- (B) as edificações nas áreas urbanas eram mais resilientes que nas áreas rurais.
- (C) os construtores da época priorizavam a resiliência urbana.
- (D) os grandes incêndios de 1452 e 1666 despertaram os governos para questões relacionadas à resiliência urbana.

3) Que formas de controle de segurança e sustentabilidade das edificações o autor propõe aos governos atuais?

4) As exigências expressas pelas três normas técnicas destacadas no artigo, em termos gerais tratam

- (A) da classificação das edificações de acordo com a utilização a que se destinam.
- (B) do desempenho estrutural das edificações e do comportamento preventivo de seus usuários.
- (C) do descumprimento das legislações que regem a construção civil e das penalidades previstas.
- (D) da forma como o desempenho de bens e serviços das edificações deve ser alcançado.

5) O que o autor constata sobre a responsabilidade dos países em desenvolvimento em relação à intervenção regulatória direta?

As questões de 6 a 10 referem-se ao TEXTO 2:

6) **É INCORRETA a seguinte afirmativa:**

- (A) *Their making* e *their primary purpose*, grifados, respectivamente, nos parágrafos 1º e 2º, referem-se a artesanato.
- (B) *Them, their* e *them*, grifados em sequência no 1º parágrafo, referem-se a artesanato.
- (C) *Regardless of*, grifado no 1º parágrafo, pode ser substituído por *irrespective of*, mantendo-se o mesmo significado.
- (D) *Thus*, grifado no 1º e 2º parágrafos, pode ser substituído por *therefore* em ambas as ocorrências, sem prejuízo de significado aos parágrafos.

7) **Segundo considerações presentes no artigo, é CORRETO afirmar:**

- (A) No passado, nomeava-se o artesanato conforme os materiais utilizados para produzi-lo.
- (B) Há controvérsias sobre a funcionalidade dos objetos utilitários.
- (C) As leis da física variam de acordo com as diferentes crenças e culturas dos artesãos.
- (D) Há limites para a variação da funcionalidade dos objetos utilitários.

8) **O artigo compara um vaso da Dinastia Shang a um vaso Inca para exemplificar que objetos utilitários, geralmente,**

- (A) variam na função primária.
- (B) variam na estética sem alterar a função primária.
- (C) desviam do formato padrão e alteram a função primária.
- (D) não obedecem às demandas das leis da física.

9) **A quais problemas refere-se o artigo no trecho “*These are problems that [...]*”, grifado no 2º parágrafo?**

10) **O que o artigo conclui sobre a diferença entre artistas e artesãos na relação com os materiais que utilizam?**

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