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Strategies for compression of socio-cultural reality in a metaphorical visual blend

This paper investigates some aspects of culturally salient and entrenched visual elements, identified as cultural stereotypes, cultural icons, and cultural symbols. An editorial cartoon is analyzed according to the network model of mental spaces from Fauconnier and Turner's Blending Theory in order to demonstrate the importance of such visual elements in producing and unpacking conceptual blends. Cultural stereotypes, cultural icons, and cultural symbols are described as distinct strategies for compressing large and diffuse socio-cultural reality.

Key words: Blending Theory; visual blend; compression; cultural stereotype; cultural icon; cultural symbol.

1. Introduction

Analyzing visual blends is an integral part of Blending Theory (BT). Some cartoon interpretations, such as Fauconnier and Turner (1994), and Coulson (2005) focus on metaphorical and metonymical projections established in visual settings. Typical to such visual representations is the concretization of abstract conceptual relations with physical properties, such as form and color. However, in case of editorial cartoons with deliberate socio-cultural messages, these concretizations must also serve as highly representative signals—known as *prompts* in BT—for complex human group relations. But how exactly does this happen?

How can a pictorial composition prompt for a much larger socio-cultural reality? In the following analysis I shall argue that a visual representation is able to communicate rich and diffuse socio-cultural background information, through the exploitation of certain visual elements, which are highly specified and entrenched in a culture. The scope of this paper is to emphasize the importance of these culturally salient visual elements in creating and interpreting visual blends. Its contribution to the study of conceptual blends consists in an endeavor to provide a structured and descriptive account of culturally salient visual elements as different strategies for compressing a much larger socio-cultural reality.

2. Theoretical background

In Blending Theory meaning arises from the co-existence and co-operation of at least four separable *mental spaces*: two or more *input spaces,* containing information about certain conceptual domains considered relevant for the on-going communication, a *generic space,* with abstract structures, which are common to all input spaces, and a *blended space,* where selected information from all input spaces is projected, and where unexpected, new meanings can emerge. As shown by Fauconnier and Turner (2003: 30), one of the central benefits of conceptual blends is their ability to provide *compressions to human scale* of diffuse arrays of reality. For example a culture, with everything and everybody belonging to it, is too diffuse and too large a reality to be comprehended by any human being as a whole. *Human scale* situations on the other hand are easily apprehended by humans, because they "typically have very few participants, direct intentionality, and immediate effect" (2003: 312). Compression to human scale happens then by selective projection from the input spaces and integration in the blend. It is possible, for example, to compress a whole group by picking one member and "pretending that there is a homogeneous nature, experience, and behavior for all members of the group" (2003: 117). In case of culturally relevant visual representations such selected elements need to be concretely depictable and to be able to signal in themselves a complexity of abstract human relations.

3. Data

The cartoon in the appendix has been chosen for analysis as it displays several culturally salient visual elements, which are results of different compression strategies, making it possible to take a closer look at the role of culturally determined visual elements in creating and understanding visual blends. Originally

published as an illustration to the New York Times cover story on the 25th of January 2001, the cartoon appeared with a striking title fitting for cover stories: "Mining the 'Deep Web' With Sharper Shovels." One can discover incongruities in the picture at first sight. Humanoid robots are digging, hacking their ways down in a dark, earth color matter. Surprisingly, it is not some kind of valuable raw material or precious ore that emerges from under the ground, but computers, household articles, newspaper sites, musical instruments, laboratory tools, books, antiques: old-fashioned TV, radio, typewriter, and so on. What makes the cartoon more surprising, even humorous, is the robots` clothing. For example, one of the robots is digging in a suit and a high hat, while the other one in a medical examination robe and a stethoscope, but a third one is just as humorous with its shopping basket and shopping cart. Obviously, the representation is aiming to communicate not so much about digging and hacking, but about something more abstract, although the scene represented evokes the frame of mine work. This surprisingly ambiguous mixture of elements is an open appeal to interpret it as a metaphorical blend and unpack its mental spaces.

4. Analysis

In this case, cues that lead to a metaphorical interpretation are not merely pictorial, since the dominant metaphorical structure operative in the cartoon world is established by an external hint: the printed text with bold capital letters, placed on the same page, which we conventionally identify as the title of the artwork. This is not at all surprising, since cartoons are by default composites of symbolic modes, constantly crossing the image-text boundary. "Mining the 'Deep Web' with Sharper Shovels' can be regarded as a prompt to establish the main mental spaces and cross-space connections of the metaphorical network. It prompts us to set up a mental space to represent some relevant aspects of mine work, another mental space to represent some relevant aspects of Deep Web search, and a blended space where these aspects are integrated, as shown in Fig. 1.

Both input spaces draw on rather conventional knowledge. Everybody knows that mine workers use shovels, hacks, drills, that they are digging underground drifts in order to find valuable raw material. On the other hand, many of us know that robots search the Web (download digital data which are indexed in the search engine's database), that we can connect to it via computer, we can do shopping on the Web, or read the latest news, do academic research, attend courses, listen to music, attend conferences, watch films, exchange mail and so on. Deep Web is also known as the popular name for that part of the Web, which cannot be searched directly using general purpose search engines like Google,

Yahoo, Msn. Moreover, the article attached to the cartoon draws attention to the existence of specialized niche search engines. *Niche* is a well known term in economy, meaning a specialized area of the market. Niche search engines can be news search engines, medical search engines, price search engines, academic search engines, legal search engines, travel search engines, code search engines and so on.

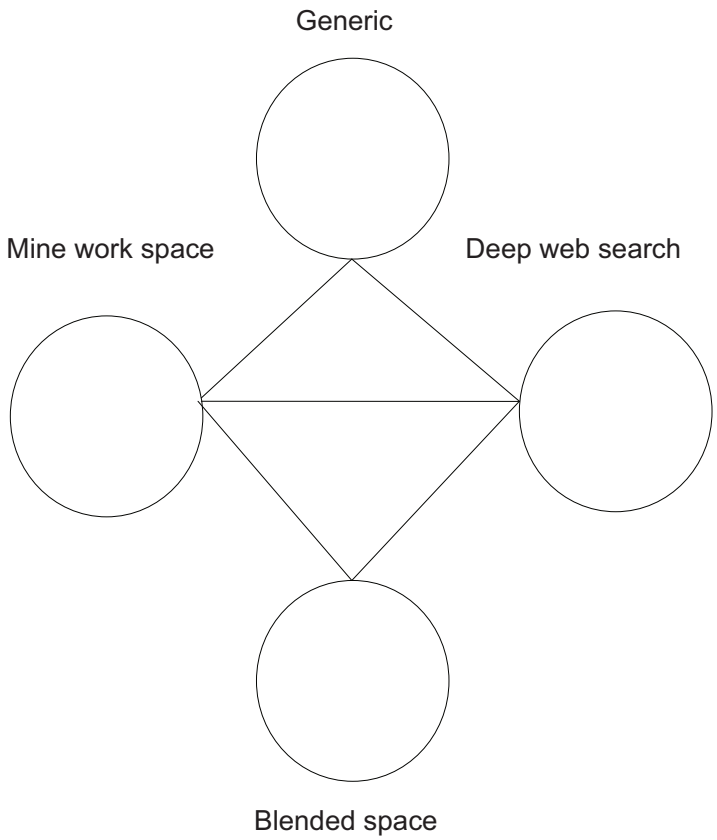

Fig. 1. Network model. The main mental spaces of the network

Niche search is better or more effective - is one of the central inferences. This idea is also highly supported by the title: “Mining the ‘Deep Web’ With Sharper Shovels.” Shovels from the mining input have the generic role of instruments just like search engines in the web search input. Moreover, the attribute *sharper* connected to the concept of an instrument conventionally triggers the idea of being better, faster, more precise, and more effective. Figure 2 shows how this inference can be imported to the Deep Web search space, and connected to the

concept of niche search engines.

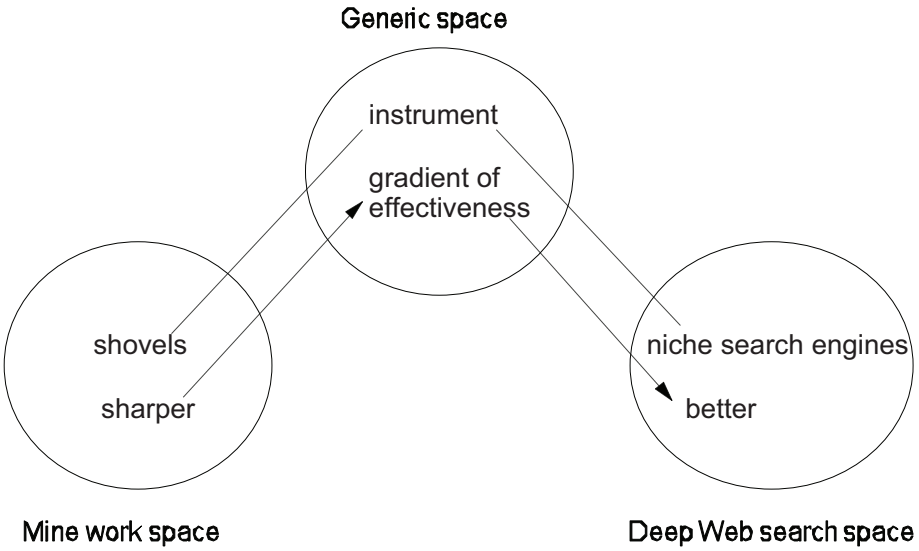

Figure 2. Projection of central inferences

Some of the cross-space connections are globally shared metaphorical projections, also called “blending templates” (Fauconnier and Turner 2003: 383), like blending the inanimate and animate (robot and person), or extending the “container,” “verticality,” “path,” and “force-dynamic” image schemas from the physical to the non-physical, in this case from mine to World Wide Web. This image-schematic structure is not "natural" for the highly abstract domain of the Web. It is a result of previous blends: for example our notion of the World Wide Web being some kind of space (hyperspace), or web search being some kind of motion along a path (surfing, visiting websites, entering or quitting, traveling the web. At first sight, the mine would correspond to the Deep Web, mine workers to specialized search robots, different mine drifts to specialized search areas, mining to Deep Web search, mined matter to niche online information. These main cross-space connections are shown in Figure 3.

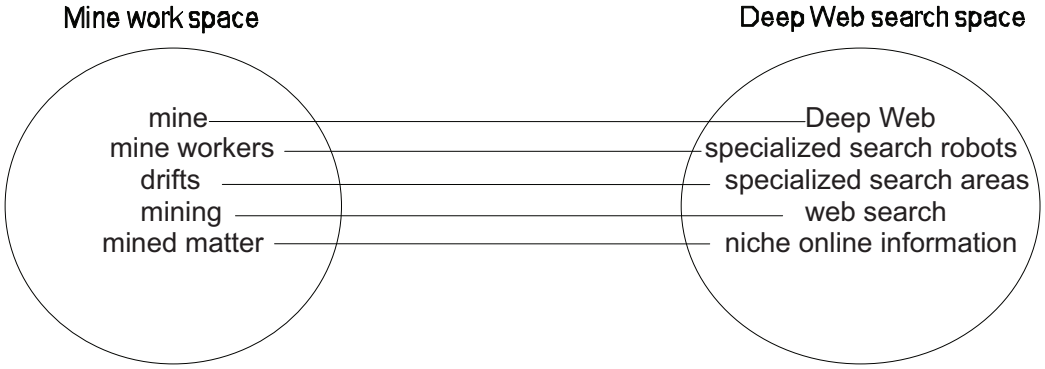

Fig. 3. The main cross-space connections

Humanoid robots are emerging entities, which arise during the process of *composition* (Fauconnier and Turner 2003: 42), where elements projected in the blend, as mine workers from the Mine work input and web search robots from the Deep Web search input, are fused in a way that creates these new elements, which were previously not present in either of the input spaces. Interestingly, what we actually see is not only blending inanimate robots with animate mine workers, but there is also a highly visible hint to their socio-cultural belonging and preferences, signaled by their garments and by the objects they are extracting. These hints create the most surprising and humorous effect of all, since under normal circumstances nobody would correlate a high hat showing the American national colors, a shopping cart, or a medical examination robe with either mine work or search engine robots. These elements seemingly do not belong to any of the inputs.

Although the robots` clothing and the numerous objects in the mine are connected to none of the input spaces, they arise during the process of *completion* (Fauconnier and Turner 2003: 43) of the visual environment. In our case completion arises through background knowledge and verbal cues from the article: "news," "price," "academic," "medical" that do have their matches outside the domains of web engineering or mine work. In a most "logical" way, the caricaturist projects the robots` scope of activity from the abstract Deep Web search input: the digital world of news search, price search, academic search and medical search engines, then she completes the abstract schema visually by drawing on her background knowledge of (the mainly American) cultural clichés about the physical appearance of clothes and objects, which conventionally and unmistakably connect to such ideas as journalism and politics, shopping, as well as

medical practice, and research. Figure 4. represents a sketch of this cognitive process.

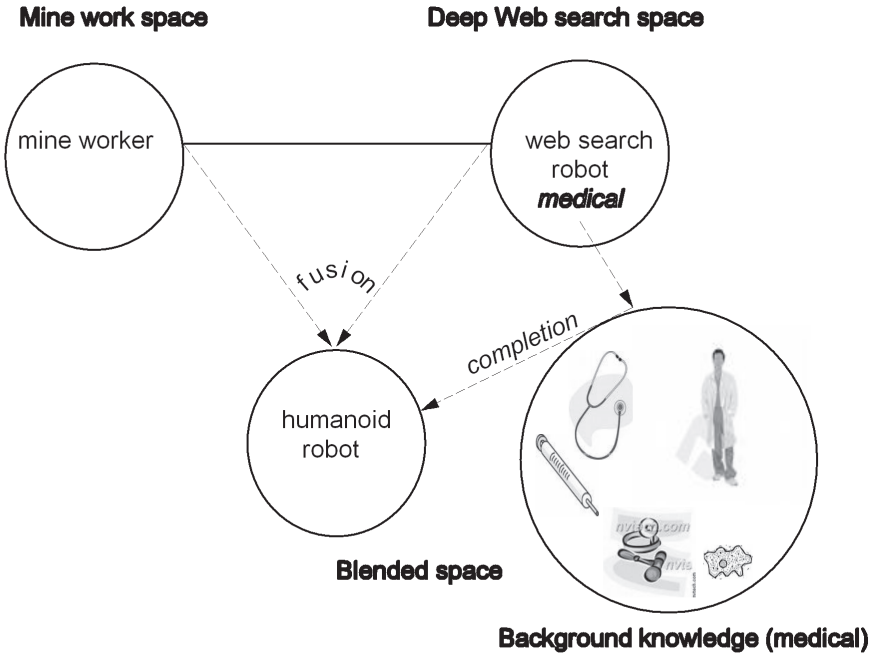

Fig. 4. Completion of an abstract schema with visual elements from background knowledge

In the blended cartoon world, it becomes possible to set up connections between mine work, humanoid robots, peculiar clothing, objects, and tools, which eventually lead to the inference that our first robot is a news search robot with mainly political inclinations, the second a price search robot, the third an academic search robot, which mainly searches archives, and the forth one a medical search robot. Clad in American national colors, a suit and a high hat, the news search robot is extracting newspapers from a mine drift, where he might also find several other objects pregnant with American historical and political significance, as the White House or the statue of Liberty. In another channel, near the news search robot, there is a price search robot laboring while also carrying a shopping basket on its arm, with a shopping basket standing behind it, and money showing from its pocket. In its mine drift there is a rich assortment of fancy goods, household articles, decor articles, musical instruments, toys and so on. The academic search robot is wearing a coat and a hat that is very similar to

what we could repeatedly see on the Indiana Jones figures. It is extracting books and some kind of documents using its hack. Around its research area we can see several old-fashioned objects: antiquated models of TV, radio or typewriter. One of the possible interpretations would be, that these are allusions to archive search, more exactly to the Internet Archive, which is one of the largest databases of the Deep Web with a huge inventory of text documents as well as audio and video files. Very suggestive is the medical search robot in its medical examination robe, a stethoscope around the neck, and mining test-tubes from its "specialty area," where a whole lot of things can be found from vials and hypodermic syringe to amoebae.

Clearly, a very general cultural model, or more precisely, cultural practice is recruited here, according to which many people consciously try to express their belonging to and preferences of certain social groups, professions or subcultures by wearing specific clothes and using specific objects. Being a widespread cultural practice, the preference for certain clothes and objects makes it possible to generalize some recurrent features and later use them as prompts for a whole socio-cultural group (political society, consumer society, historical society, medical society), a process that Kövecses terms "cultural stereotyping" (2006: 109), which is a kind of metonymic identity compression. Billions of web users with similar niche interests are compressed metonymically by homogenizing them according to stereotypical clothes and objects of use. For example all people, who might want to search for online medical information, are compressed into a frame of cliché or stereotype: a person wearing a white medical robe, with a stethoscope around the neck and a medical light on the head, as seen in Figure 5.

We should not forget that all these metonymical identity compressions happen within a metaphor. Metonymy within metaphor occurs according to Goossens when "a metonymic mapping is inserted into a metaphoric one" (1995: 174). The main metaphoric mapping of this cartoon is set up between mine workers and web search robots, but embedded in it, there are actually several metonymic mappings tightened together, which are of crucial importance for understanding the blend. There is a metonymical contiguity between instruments of action (web search robots) and agents (web users), a contiguity between web users and their clothes and objects, and a contiguity between a certain category of web users and one member wearing stereotypical clothes and using stereotypical objects. This metonymical chain is then compressed together into robots with stereotypical clothes and objects: *a cultural stereotype*. By having a single robot in a medical robe, it is possible to represent all web search robots indexing medical online content and each person using medical search engines. Since their number would be beyond human comprehension, the cartoonist here employs what Fauconnier and Turner refer to as *compression to human scale* (2003: 312).

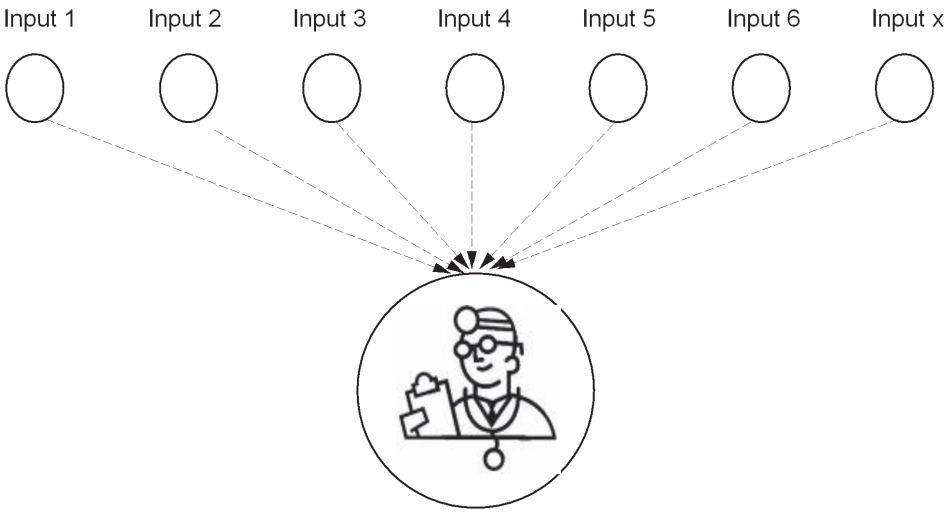

Figure 5. Compressing a cultural stereotype

Metonymic integration of the scene happens at the expense of preserving the agent-instrument relationship. Consider the agent-instrument relationship in both the Mine space and the Deep Web search space. In mine work the agents are human mineworkers and the instruments might range from shovels, hacks, drills to more modern technology. In the Deep Web search space agents are web engineers, designing and controlling search robots, and users (also typically human) who might have special niche interests. They can be medical people with health care interests, academicians interested in history, people who want to buy something, or read the latest news. Web search robots in this space have the function of instruments. In the blend we have fused agents, who look half human, half robot, are extracting things like mine workers usually do, but have clothes and objects that—drawing on our active cultural stereotypes—prompt us to identify them as clearly belonging to other socio-cultural groups than mine workers. A humanoid robot, doing mine work with a shopping cart, a shopping basket, and cash in the pocket, will connect to a mine worker in the Mine work input, and at the same time to both web search robot and web user, who wants to do some shopping, in the Deep Web search input. These fused agents, as shown in Figure 6 reflect projections not only from the agents in the Mine work space (mine workers) and agents in the Deep Web search space (niche web users), but also from the instruments in the Deep Web search space (robots).

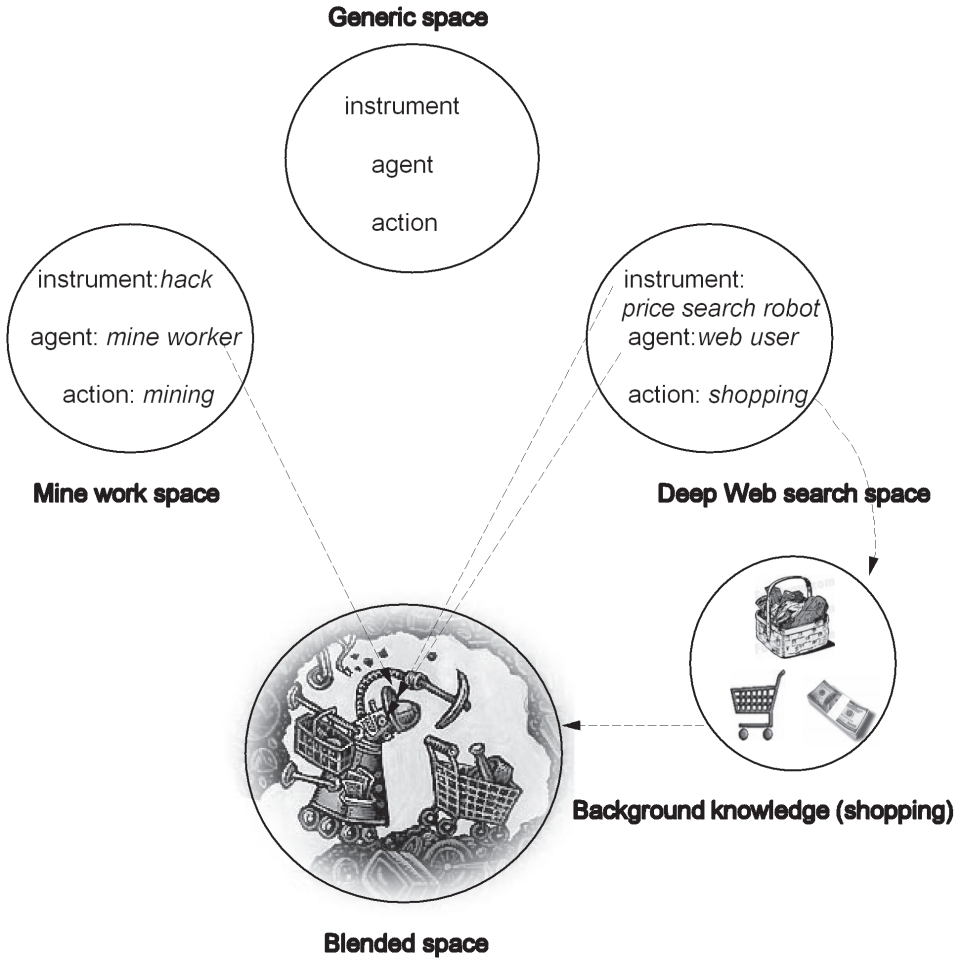

Fig. 6. Combining and fusing agents and instrument in the blend.

As we have seen, the integration network is combining and fusing one element from the Mine work input (agent: mine worker) with more than one element (agent: niche web user, and instrument: web search robot) from the Deep Web search input. Coulson and Oakley (2003), and Fauconnier and Turner (1999) analyze similar examples, where an element in the blended space connects to two elements in one input space via metonymical compression of elements. As analyzed by Fauconnier and Turner (1999), blends can actually combine non-counterpart elements that come from different inputs. In our case, mined matter in the Mine work input is a counterpart of niche information in the Deep Web search input, not of car, book, typewriter or planet. On the other hand, websites with specific niche content being quite abstract, cannot in themselves

provide concrete, specific elements required by the pictorial mode of representation. But information about "something" can be metonymically connected to that "something," where referent (or more precisely a pictorial representation of the referent) stands for concept (information). Thus, the blend is free to combine mined matter with a large number of "somethings" like car, book, typewriter, planet, and so on. Due to these metonymies, not the concept of niche information, but the numerous objects represented in the cartoon will combine with mined matter. Their more or less random position in their specific drifts comes from the topology of mines, where mined matter lies in natural, unorganized way. A simple representation of this process can be seen in Figure 7.

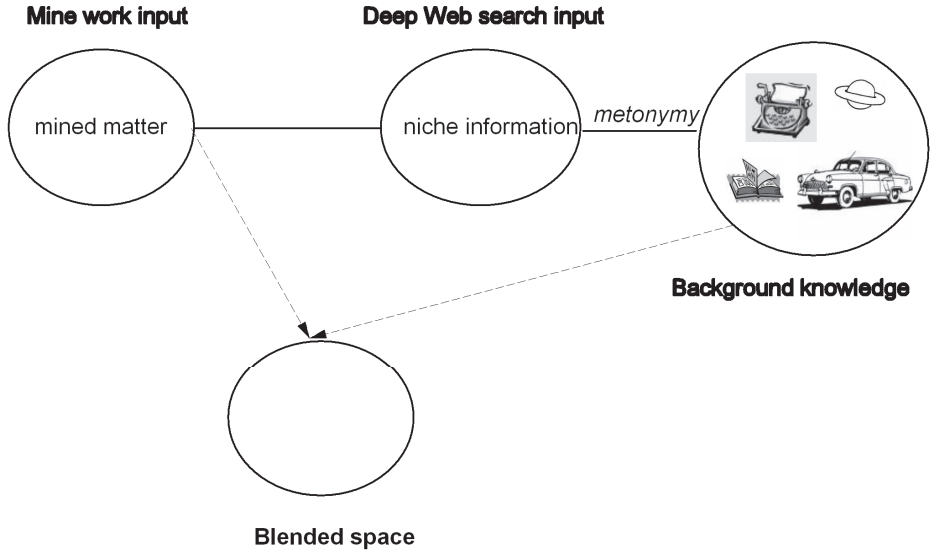

Fig. 7. Combining non-counterpart elements in the blend

Household articles, buildings, medical equipment, and other objects lying randomly in the ground, is actually an emerging relation of the blend, which did not exist before in any of the input spaces. In the Mine work input it is impossible to extract modern technical equipment from the mere ground, but it is just as impossible to fall upon a computer with a hack when we want to find something in the Deep Web.

The Web itself is an enormous conglomerate of diverse elements, functions, and information channels. It requires quite some imaginative work to compress this diffuse mass to human scale, and express its plurality within an integrated scenario, like working in a mine. Some objects depicted in the cartoon metonymically compress diffuse functions of the web, as the picture of a computer

screen, which can compress the world wide network of computers functioning as a material basis of the World Wide Web. Likewise, the picture of a planet might refer to the possibility of making astronomical observations by using Deep Web resources. A diffuse structure is compressed into a few details. A shopping cart for example is a compression of the complex structure of commerce, including many agents and many events, into one simple material object. We do not need a shopping cart on the web, yet the stylized picture of the shopping cart had become the conventional icon of online transactions, just like the envelope in the case of electronic mail and a diploma for academia. But we should keep in mind that it is only a cultural convention of present times that we fold a mail as in Figure 8:

Fig. 8. Mail

and a diploma as in Figure 9:

Fig. 9. Diploma

There was a time when the second icon would have sooner prompted the viewer to interpret it as a mail.

A number of objects represented in the cartoon may be regarded as having a special status, as especially important to, or loved by a particular (sub)culture or defining a cultural age. Consider a car for example. Helgesen (2001) describes it aptly as:

> More than any other invention, the car is the defining cultural icon of the 20th century. Although ostensibly just transportation, we all know it's a status symbol, social statement and art. If you consider yourself an environmentally conscious urbanite, you may drive a small, gas-efficient subcompact. If you feel young and hip and want everyone to know it, you may drive a red sports car. If you were a child of the ‘60s, you probably

once drove a psychedelically decorated Volkswagen van. (2001:1)

Objects (and sometimes famous persons) that are especially important, highly representative, and as such easily recognizable as belonging to a special socio-cultural group or age, are often named *cultural icons*. Being part of the socio-cultural group or age they represent, they invoke specific sets of values, norms, and beliefs embedded in the respective (sub)culture or cultural age. Cultural icons enhance cognition by their density of meaning. This multiplicity of meaning is achieved through metonymical compression, but in another way than cultural stereotyping, where a stereotypical member of a group stands for the whole group. To a limited extent, a cultural icon is like a synecdoche, where a salient and usually widely popular element stands for the whole, expanded with a great amount of symbolic meaning.

Being highly entrenched metonymical-symbolic mappings, cultural icons are routinely exploited in cartoons. Some of the most prominent cultural icons represented here are the robot or cyborg, and the atom, embodying both the potentials, and threats of nuclear machine age; the computer and mobile phone as the defining cultural icon for the digital generation; the guitar and LP as most important instruments in popular culture. In the picture in Figure 10 we can see a simplified representation of how a cultural icon can connect to a much larger cultural reality.

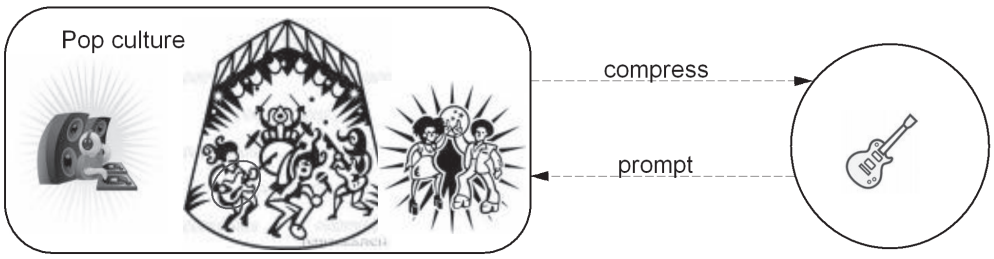

Fig. 10. The functioning of a cultural icon

Cultural icons can carry strong ideological implications of value, power, and political interest too, like the American flag, the White House or the statue of Liberty, which is compressing the diffuse and vague concept of the American people or the American government to human scale. All cultural icons mentioned till now, were projected in the blended cartoon representation unaltered,

as clearly identifiable objects lying in the ground. But there is one cultural icon that actually gets fused together with one of the humanoid robots. Uncle Sam is perhaps the most salient national personification of the United States. The icon is mostly depicted as a serious elderly white man with white hair and a goatee, and dressed typically with a top hat with red and white stripes, and white stars on a blue band. What we can actually see in the cartoon are these culturally specified details fused together with salient elements from a mine worker and a robot, as seen in Figure 11.

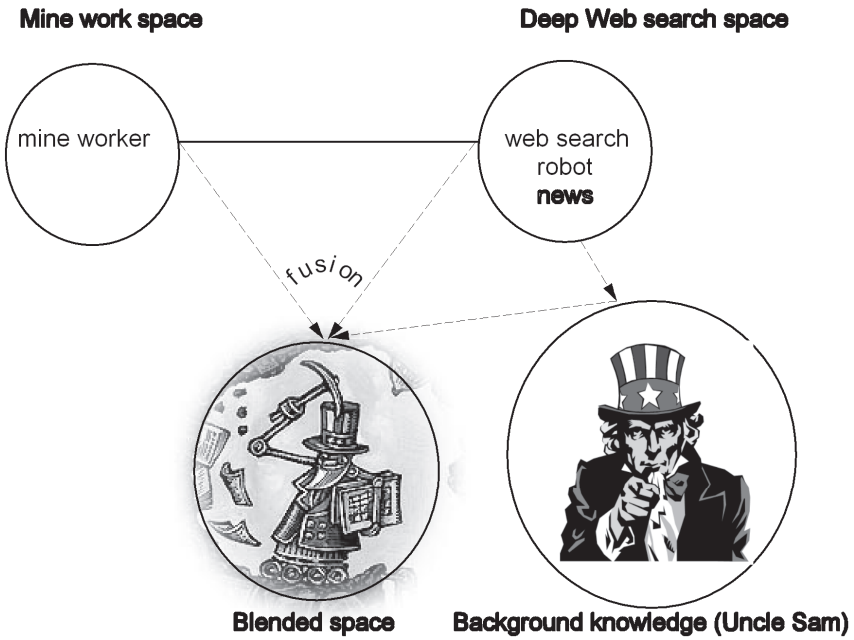

Fig. 11. Fusing a cultural icon with an element in the blend

Parts of the representation cannot be categorized as either cultural stereotypes or cultural icons, although they compress and prompt rich culture-specific background information. In fact they have no metonymic relation with the socio-cultural reality they represent. The freemasonic symbol of the square and the compass and the caduceus symbol of the medical science are not metonymically contiguous with freemasonry and medicine. They are results of symbolic mappings. They are symbolic, because the conceptual connections between the visual composition and the general concept it represents are determined by an arbitrary convention of the (sub)cultural community.

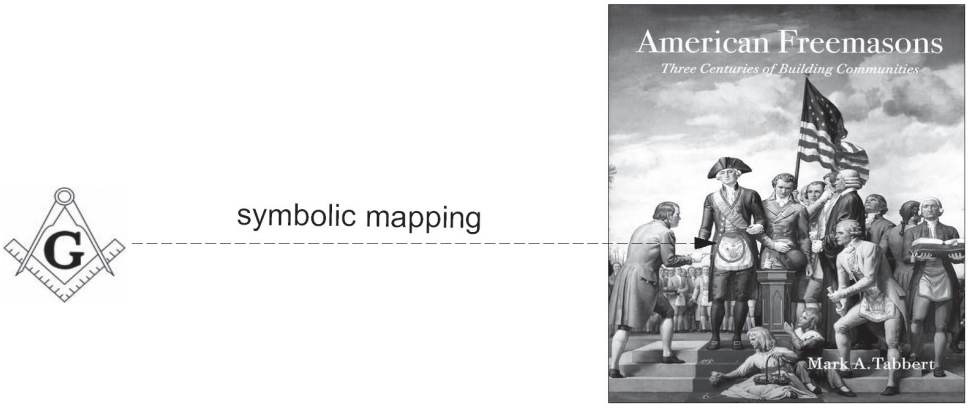

Fig. 12. Mapping a cultural symbol

The fact, that such symbols are culture-specific, is well exemplified by the caduceus (Figure 13)

Fig. 13. Caduceus

which is used as a symbol for medicine especially in North America through confusion with another medical symbol, the rod of Asclepius (Figure 14),

Fig. 14. Asclepius

which has only a single snake and no wings. Symbols just like cultural stereotypes and cultural icons are widely recognized and compress meanings beyond the objects they illustrate.

Although the cartoon representation compresses a great amount of socio-cultural information into one tightly integrated form, there is an allusion to it being only a portion of the whole. The open mine drift on the bottom of the page, seemingly cut off by the picture frame, is an appeal to imagine as the mine continues with additional drifts and more robots working in them. Imagine the travel search robot for example working in another drift not visible in the cartoon. We could imagine him wearing a bahama shirt, shorts, sunglasses and a straw hat, carrying his travel bag in one hand and holding a boarding card in another, while he is searching for airplanes, palm trees, hammocks, and cocktails. We can simulate this mentally during the process of *elaboration* (Fauconnier and Turner 2003: 44), an expanded form of completion according to the specific logic of the blend. As we have seen, the logic of this visual blend requires the abstract concept of the specialty area of a search robot to be projected from the Deep Web search space: for example travel search, legal search, business intelligence search and so on. This abstract concept is then concretized and completed, drawing on our socio-cultural background knowledge with concretely depictable elements, which are unmistakably connected to the respective concept. Such highly identifiable elements can be cultural stereotypes, cultural icons or cultural symbols.

5. Concluding remarks

In this paper, I have studied some aspects of culturally salient visual elements, which I have identified as cultural stereotypes, cultural icons, and cultural symbols. The main aim of the paper was to stress the role of such culturally deter-

mined and entrenched visual elements in producing and interpreting conceptual blends. "Mining the 'Deep Web' With Sharper Shovels," the editorial cartoon chosen for analysis, exemplified some remarkable characteristics of conceptual blending. In its formal economy it was able to articulate the complexity of the World Wide Web and the diversity of its public in a tightly integrated scenario. Through the use of a number of cultural stereotypes, cultural icons, and cultural symbols, it displayed different conceptual strategies to provide highly recognizable visual compressions of diffuse and abstract values, norms and assumptions of some cultural groups and our contemporary age.

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STRATEGIJE ZA KOMPRIMIRANJE DRUŠTVENO-KULTURNE STVARNOSTI U METAFORIČKOM VIZUALNOM BLENDU

Prilog istražuje neke aspekte kulturno istaknutih i uvriježenih vizualnih elemenata koje se može identificirati kao kulturne stereotipe, kulturne ikone i kulturne simbole. Pomoću mreže mentalnih prostora unutar teorije konceptualne integracije Fauconniera i Turnera analizira se karikatura iz jednog uvodnika kako bi se pokazala važnost takvih vizualnih elemenata u proizvođenju i razumijevanju konceptualnih blendova. Kulturni stereotipi, kulturne ikone i kulturni simboli opisuju se kao posebne strategije za komprimiranje velike i difuzne društveno-kulturne stvarnosti.

Ključne riječi: teorija konceptualne integracije; vizualni blend; komprimiranje; kulturni stereotip; kulturna ikona; kulturni simbol.

Appendix