The existence of conflicts of interest in the field of food and nutrition is not new, but has intensified and has been better documented during the past decade, in terms of both knowledge production and dissemination, and of policy formulation and management. Since the 1970s, more than eight thousand articles about conflicts of interest were published in health sciences reference databases (MEDLINE and LILACS). In contrast, only a few dozen food and/or nutrition-related articles were published during the past 20 years, three fourths of which in the last decade alone.

The recent increase in documenting food and nutrition-related conflicts of interest is proportionally higher than what was observed for the overall publications in the same databases. This indicates that the conflicts intensified or that the recognition of conflicts as such expanded, and/or there was stronger motivation to make them visible.

Both in knowledge production and dissemination and in the formulation of food and nutrition policies, the growth, intensification and increased visibility of the conflicts of interest, and lack of compliance with them are partially based on the increase of flaws in food systems, which prevent them from fulfilling their purpose of ensuring suitable, healthy food to the population. Therefore, in order to move forward in facing conflicts of interest in this field, it is necessary to recognize nutritional problems as expressions of flaws in the food system. It is thus possible to identify common, structural causes that account for different problems, such as obesity, micronutrient deficiencies, and other forms of malnutrition, therefore avoiding ineffective or palliative solutions. Moreover, it is necessary to identify and characterize the responsible for such flaws.

There is broadly documented evidence that these dramatic changes in the food systems and in the feeding of populations have been imposed globally by large transnational corporations. Such changes affect the way food is produced, supplied, prepared and eaten, with the ultimate goal of generating wealth for these corporations and increasing their market share in a concentrated way. Therefore, in addition to the nutritional problems they trigger, these corporations also cause an important negative effect on inequity, starting from the corporate environment itself. A study conducted in 2013 revealed that an employee of the McDonald's Corporation in the United States needs to work 1,196 hours to receive the equivalent of one hour's work of the company's CEO.

The socioeconomic, environmental and cultural impact of this model imposed by such corporations also favors an increase in the recognition of conflicts that previously were not acknowledged as such. Therefore, the intensifi-
Table 1

Characterization of the ten largest transnational corporations that are members of the International Food & Beverage Alliance (IFBA) according to their products, practices, policies and market share.

<table>
<thead>
<tr>
<th>Company</th>
<th>Global market share * (product)</th>
<th>Examples of associated organizations and initiatives operating internationally **</th>
<th>Policies ***</th>
<th>Products #</th>
<th>Practices ##</th>
</tr>
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<tbody>
<tr>
<td>The Coca-Cola Co.</td>
<td>52% (soft drinks and other carbonated beverages)</td>
<td>IFBA, ILSI, Beverage Institute for Health &amp; Wellness, EPODE International Network, GAIN Business Alliance</td>
<td>“In 2011, we built strong momentum toward our 2020 goal of doubling our business over the course of this decade”; “For 2011, we ramped up our efforts to win with Coca-Cola, the oxygen of our business” ###</td>
<td>Sugary drinks</td>
<td>Yes (e.g., placement soft drinks vending machines in schools and health care facilities)</td>
</tr>
<tr>
<td>Ferrero</td>
<td>8% (chocolate confectionery)</td>
<td>IFBA, ILSI, EPODE European Network</td>
<td>“Ferrero has been present in Brazil since 1994, when it introduced the Kinder Surprise in the market. At first there were only 10 employees, all with the common goal of developing and expanding the company” §</td>
<td>Sweets, candies, chocolate confectionery and other sugary products</td>
<td>Yes (e.g., associating sugary edible products with toys that are attractive to children)</td>
</tr>
<tr>
<td>General Mills</td>
<td>15.7% (snack bars)</td>
<td>IFBA, ILSI, The Bell Institute of Health and Nutrition, Cereal Partners Worldwide, SUN Business Network</td>
<td>“As we turn to our 2015 fiscal year, our number one priority is to accelerate our net sales growth”; “Our advertising and media investment has grown by 19 percent from 2009 levels to $870 million worldwide in fiscal 2014” §§</td>
<td>Cereal extrudates and other sugary products; ice creams with high concentrations of sugar, fats and energy; ready-to-eat meals and soups, sauces, cookies and other snacks with high concentrations of salt, sugar, fats and/or energy</td>
<td>Yes (e.g., the use of websites and interactive games associated with products advertisement – i.e. “advergames” – targeted for children)</td>
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Table 1 (continued)

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<td>Kellogg Co.</td>
<td>29.9% (cereal extrudates and breakfast cereals)</td>
<td>IFBA, ILSI, W. K. Kellogg Foundation</td>
<td><em>The most recent and largest program that is currently active is Project K (...) The focus of the program will be to strengthen existing businesses in core markets, increase growth in developing and emerging markets, and drive an increased level of value-added innovation</em> §§§</td>
<td>Sugary cereal extrudates</td>
<td>Yes (e.g., the use of characters with appeal to children on packages of colorful sugary cereal extrudates)</td>
</tr>
<tr>
<td>Mars Inc.</td>
<td>14.1% (chocolate confectionery)</td>
<td>IFBA, ILSI, IDFA, EPODE European Network, GAIN Business Alliance, SUN Business Network</td>
<td><em>We are very pleased to have a leader of Jean-Christophe’s caliber at the helm of the global chocolate business. Jean-Christophe’s proven leadership, strategic mindset and background in finance and general management will help continue the growth of this important segment within our business</em> (Grant Reid, president of Mars Inc., about the president of Global Chocolate, Mars Inc.) †</td>
<td>Sugary drinks, confectionery, candies, chocolate confectionery and other products with high concentrations of sugar and/or energy</td>
<td>Yes (e.g., promoting the purchase of ultra-processed products through social media advertisement, e.g., Facebook, Twitter; designing of excessively colorful ultra-processed products to attract children)</td>
</tr>
<tr>
<td>McDonald's Corp.</td>
<td>13.5% (fast-food snacks)</td>
<td>IFBA, ILSI, Ronald McDonald House Charities</td>
<td><em>Vision, mission, aspiration: be our customers’ favorite place and way to eat</em> ‡</td>
<td>Sandwiches with high concentrations of energy, salts and fats; sugary drinks and other products with high concentrations of energy, sugar, salt, and/or fat</td>
<td>Yes (e.g., association of ultra-processed products with children-appealing characters, such as clowns and animation characters)</td>
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<tr>
<td>Mondelez International Inc.</td>
<td>18.2% (cookies); 14.3% (candies, chocolates and other confectionery)</td>
<td>IFBA, ILSI, Save the Children</td>
<td>“We promote our products with advertising, marketing, sales incentives and trade promotions”; “We expanded our brand presence across digital media and continue to make our working media more effective” †††</td>
<td>Sugary drinks, confectionery, candies, chocolate confectionery and other sugary products; ice creams with high concentrations of sugar, fat and energy; ready sauces, cookies and other snacks with high concentrations of sugar, fat, salt and/or energy</td>
<td>Yes (e.g., promoting contests, competitions, sales and give away prizes to encourage purchase and intake of sugary drinks and other ultra-processed products)</td>
</tr>
<tr>
<td>Nestlé SA</td>
<td>12.2% (ice creams and chocolate confectionery)</td>
<td>IFBA, ILSI, IDFA, EPODE International Network, Nestlé Nutrition Institute</td>
<td>“We have deep roots in emerging markets, where we have continued to expand our presence” †</td>
<td>Sugary drinks, cereal extrudates and other sugary products; ice creams with high concentrations of sugar, fat and energy; ready-to-eat meals and sauces, instant, soups, cookies and other snacks with high concentrations of salt, sugar, fat and/or energy</td>
<td>Yes (e.g., placement and expansion of ultra-processed products with high concentrations of sugar, salt, fat and/or energy in indigenous and low-income communities)</td>
</tr>
<tr>
<td>PepsiCo Inc.</td>
<td>29% (sweet and savoury snacks); 19.8% (soft drinks and other carbonated beverages)</td>
<td>IFBA, ILSI, Save the Children, GAIN Business Alliance, SUN Business Network</td>
<td>“A growing percentage of our advertising and marketing spend is now dedicated to digital platforms as consumers dramatically change the way they engage with media. We are leveraging Facebook, Twitter, Instagram and other channels in innovative ways to produce compelling content, drive engagement and build brand equity”; “In 2014, we launched our largest ever global campaign for Pepsi and Lay’s, cross-promoting these brands in 28 markets” ‡‡</td>
<td>Sugary drinks, savory cereal extrudates and other savory and sugary products; ready-to-eat meals, soups, sauces, cookies and other snacks with high concentrations of salt, sugar, fat and/or energy</td>
<td>Yes (e.g., sponsorship of scientific meetings and organizations related to the nutrition, and of sports events)</td>
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The previously mentioned wealth accumulation and market concentration. As a result, the business sector begins to work even more aggressively in preventing and delaying solutions focused on structural causes that are sustained and enhanced by transnational corporations. Instead of only defending itself or avoiding regulation, the sector openly (e.g., on behalf of a particular company) or covertly (e.g., by means of foundations, or professional, research, or non-for-profit organizations that defend the interests of companies that founded, fund or control them) interfere in the policy-formulation process.

Since the 2011 United Nations General Assembly, the interferences towards supranational cation of conflicts of interest in the field of food and nutrition also results from advances in social recognition of food and nutritional problems by sectors other than those directly related to the matter. The United Nations General Assembly held in 2011 is a milestone that formalizes the broad recognition of the matter, since, for the first time in history it was on the agenda of the Member States represented by Heads of State, and not food, nutrition and health authorities only.

This broader recognition of malnutrition as a problem for societies signals an intensification of the search for solutions. The solutions should tackle the causes and repercussions of

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<tr>
<td>Unilever</td>
<td>20.9% (ice creams); 15.8% (instant and ready soups)</td>
<td>IFBA, ILSI, IDFA, Choices Programme, Save the Children, GAIN Business Alliance, SUN Business Network</td>
<td>“Vision – to double the size of the business”; “We spend about €7 billion annually on marketing, making us one of the world’s biggest advertisers”</td>
<td>Sugary drinks, cereal extrudates and other sugary products; ice creams with high concentrations of sugar, fat and energy, ready-to-eat meals, soups, sauces, cookies and other snacks with high concentrations of salt, sugar, fat and/or energy</td>
<td>Yes (e.g., using images of ingredients on labels of products that do not contain, or contain only a trace of the ingredient portrayed on the label)</td>
</tr>
</tbody>
</table>


* Global market share in 2014 (percentage of retail value). Source: Euromonitor International;

** Organizations and/or alliances and initiatives designed, founded, funded, led, controlled or organized by such company (jointly with other companies or not);

*** Policies, objectives, principles, visions, missions and/or goals that reinforce the expansion of the referred products and practices;

# Products manufactured by the company that are not recommended for healthy and sustainable diets (e.g. edible products with high concentrations of sugar, fats, salt, energy, other ultra-processed products or any other product whose demand, offer or availability should be reduced to improve the population’s nutrition and health);

## Practices adopted by the company to increase the demand, offer or availability of non-recommended products, or to encourage non-recommended eating practices (e.g. overeating, lonely eating, mindless eating, binge eating, fast eating);

### The Coca-Cola Company 2011 Annual Review;

† http://www.ferrero.com.br/ferrero-do-brasil;

§ General Mills 2014 Annual Report;

§§ Kellogg Company 2014 Annual Report;

§§§ Nestlé Annual Report 2012;

†† PepsiCo, Inc. Annual Report 2014;


‡‡‡ Unilever Annual Report and Accounts 2014.
organizations, such as the World Health Organization (WHO), have been intensified, but they also reach the countries. Recently, the WHO launched a public consultation on its draft principles and policies of engagement with non-Sates actors, which has at the core of discussion the distinction between actors in the public and in the commercial interest, and the avoidance, prevention and management of conflicts of interests. The public consultation has been closed, but the document is still under discussion, and at the center of the dispute, is the interaction of private commercial actors with WHO, as well as their role in the formulation of policies.

In addition to the direct pressure the WHO to interfere with policies, transnational corporations also lobby within Member States in order to influence their position before WHO. As an example, it was recently exposed Italy’s position against the new (more restrictive) recommendations of WHO on sugar intake. The isolated opposing position of that country surprised all other 33 Member States of the WHO Executive Board. Later, the Italian Observatory on Global Health revealed that a former advisor of the Ferrero group, an Italian manufacturer of confectionary products, was a member of Italy’s Foreign Relations delegation.

Despite the growing visibility of conflicts of interest situations, there are still cases where the interaction between individual or collective parties is not clearly recognized as conflictual. Moreover, with the political power highly sensitive to economic pressures, United Nations’ agencies and governments are more and more encouraged to take a favorable position in regards to the involvement of the private sector in the formulation and development of food and nutrition policies, adopting an indiscriminate and quite reductionist perspective, commonly stated as: “we must engage the private sector”. In addition, transnational corporations make huge investments to make conflicts of interest in food and nutrition seem natural and/or invisible, and reinforce a cynical denial about them.

On the other hand, there is a growing mobilization of initiatives to protect health public policies from the interference of commercial interests. In 2011, a coalition of 160 national, regional and international networks and organizations endorsed a statement demanding from the United Nations a clear distinction between public-interest and business-interest organizations (Conflicts of Interest Coalition; http://coicoalition.blogspot.com/). In Brazil, dozens of individuals and civil society entities, research institutions and other organizations established, in 2013, the Front for the Regulation of Public-Private Relationship in Food and Nutrition (http://regulacaopublicoprivado.blogspot.com), with one of its goals being the articulation of collective actions to tackle and regulate conflicts of interest.

Notwithstanding, there are still a number of situations in which individuals, organizations or institutions that act in favor of the public interest have difficulties in breaking conflicting interactions with sectors of opposing interests. For this reason, some elements that may contribute to make such interactions be perceived as conflictual and justify their discontinuance will be provided here.

In the case of food and nutrition, in order to materialize or characterize the interests so as to identify those that oppose healthy and sustainable diets, one should go beyond the analysis of the products manufactured by the companies, and also take into consideration their practices and policies (including mission, goals, aims, principles, vision). In addition to companies, organizations and initiatives in which they take part should also be considered, as presented in Table 1 and Figure 1.

It is noteworthy that, just by the products, the non-interaction of a food and nutrition organization, for instance, with a manufacturer of products that are not recommended for healthy and sustainable diets would already be justified. However, there is often the argument that the company manufactures other products that are not contraindicated, and the discussions get lost in defining what a healthy or non-healthy product is, and do not advance. For this reason, it is essential to gather information on the corporate practices and policies that will reveal, undoubtedly, the interest of the company and related organizations.

Table 1 presents examples of products, practices and policies of the ten largest transnational corporations that are members of the International Food & Beverage Alliance (https://ifbaliance.org/about/members/) to illustrate the application of the criteria presented on Figure 1. These companies manufacture products and promote practices that are not recommended for healthy and sustainable diets, and adopt policies that reinforce the expansion of such products and practices. Moreover, they hold significant shares of these products’ global market (Table 1). Table 1 also serves as a basis to support the discontinuance of conflictual interactions of organizations and professionals that do not recommend or endorse the products, practices and/or policies of the referred companies with these and others companies that manufacture such products, promote such practices and/or adopt such policies.
Actors in the commercial sector that should not be engaged:

1. Arms, tobacco and alcohol industry.

2. Related industries, companies and organizations *** whose...

   2.1. Products include genetically modified organisms, pesticides, synthetic fertilizers, beverages and edible products with high concentrations of sugar, fats, salt, energy, other ultra-processed products or any other product that is not recommended or need to have its demand, offer, production and/or availability reduced to improve population’s health and nutrition;

   and/or whose...

   2.2. Practices include:

   2.2.1. Advertisement, promotion and other marketing strategies that aim at increasing the demand for the referred products and/or promote or stimulate unhealthy ways of eating, such as overeating, lonely eating, mindless eating, binge eating, fast eating, or ways of producing/growing foods that are based on the use of pesticides and genetically modified organisms, or;

   2.2.2. Lobbying against legislative, economic, juridical or sociocultural measures that aim at reducing the production, supply, availability or demand of the referred non-recommended products and/or the exposure to the referred unhealthy and unsustainable ways of eating and producing foods;

   and/or whose...

   2.3. Policies, objectives, principles, visions, missions and/or goals include or related to the increase on the production, supply, availability or demand of the referred non-recommended products and/or to the expansion of opportunities and promotion of the referred unhealthy and unsustainable ways of eating and producing food.

* Not even as funders or supporters;
** Including courses, conferences and other technical-scientific meetings;
*** Any other organization and/or alliance and initiative conceived, founded, funded, led, controlled or organized by these industries and companies.

Other companies not listed on Table 1 may be similarly analyzed by the same criteria (Figure 1) in order to identify those that oppose the public interest in regards to improving population’s diet and health. The information about products, practices and policies of companies and related organizations may be easily obtained in product sales points, websites of the companies and of their products, and/or annual reports of the companies and related organizations.

The problems associated with the operation of transnational corporations, such as those mentioned here, are evident. However, most proposed or attempted solutions avoid this issue, and those that face the issue are strongly opposed. For this reason, corporations and related organizations responsible for that opposition should be vigorously exposed and recognized as mainly the ones maintaining and disseminating the problem and its causes. It could then be possible to achieve robust solutions that tackle the structures and actors responsible for the faults in food systems that prevent the adequate nourishment of populations.

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