

Reflections on the public policy of animal protection and welfare of Bogotá

Reflexiones sobre la política pública de protección y bienestar animal de Bogotá

Reflexões sobre políticas públicas de proteção e bem-estar animal em Bogotá

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Abstract

Introduction: the ethical consideration for the welfare and protection of animals is supported by scientific studies on sentience, which means that they are capable of feeling pain, suffering, satisfaction, tranquility, among other emotions. For this reason, it has begun to be recognized that animals are sentient beings that deserve special consideration and respect. **Objective:** to show how the concept of animal sentience is part of the Public Policy for Animal Protection and Welfare of Bogotá 2014-2038, and how it is measured based on some social indicators. **Methodology:** two phases were developed: I) search for indicators about the sentience of animals, II) processing of a database of companion animals identified with microchips in Bogotá. Results: I) Only one indicator was found about the opinion on the sentience of dogs and cats used in the "Survey of Cultural Factors Associated with the Relationship between People and Animals" applied in Bogotá. This is an impact indicator that aims to demonstrate the status of citizen culture regarding the relationship with animals. II) The database contains records of 206,706 dogs and cats. Almost half of the companion animals that have a microchip up to now are in socioeconomic stratum 2. **Conclusions:** the need to transform the relationships between animals and humans is affirmed, so that citizens change their daily practices and demand its rulers immediate actions for the protection of all animal

Key words: Animals; sentience; Public politics; Animal Protection; Social indicators.

Resumen

Introducción: la consideración ética por el bienestar y protección de los animales está soportada en estudios científicos sobre de la sintiencia, lo cual significa que son capaces de sentir dolor, sufrimiento, satisfacción, tranquilidad, entre otras emociones. Por ello, se ha empezado a reconocer que los animales son seres sensibles que merecen especial consideración y respeto. **Objetivo:** mostrar cómo el concepto de sintiencia animal hace parte de la Política Pública de Protección y Bienestar Animal de Bogotá 2014-2038, y cómo esta se mide a partir de algunos indicadores sociales. **Metodología:** se desarrollaron dos fases: I) búsqueda de indicadores acerca de la sintiencia de los animales, II) procesamiento de una base de datos de animales de compañía identificados con microchip en Bogotá. Resultados: I) Se encontró solo un indicador acerca de la opinión sobre la sintiencia de perros y gatos utilizado en la "Encuesta de Factores Culturales Asociados a la Relación entre Personas y Animales" aplicada en Bogotá. Este es un indicador de impacto que pretende demostrar el estado de la cultura ciudadana con respecto a la relación con los animales. II) La base de datos contiene registros de 206.706 perros y gatos. Casi la mitad de los animales de compañía que hasta el momento tienen un microchip se encuentran en el estrato socioeconómico 2. **Conclusiones:** se afirma la necesidad de transformar las relaciones entre animales y humanos, de manera que los ciudadanos cambien sus prácticas cotidianas y exijan a sus gobernantes acciones inmediatas para la protección de todos los animales.

Palabras clave: Animales; Sintiencia; Políticas públicas; Protección animal; Indicadores sociales.

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183

Resumo

Introdução: a consideração ética para o bem-estar e a proteção dos animais é apoiada por estudos científicos sobre o sentimento que significa que são capazes de sentir dor, sofrimento, satisfação, tranquilidade e sentir, entre outras emoções. Como resultado, tem sido começado a reconhecer que os animais são seres sencientes que merecem consideração e respeito. **Objetivo:** mostrar cómo o conceito de sentimento animal é parte da Política Pública de Proteção e Bem-Estar de Bogotá 2014-2038, e como isto é medido com base em alguns indicadores sociais. **Metodologia:** foram desenvolvidas duas fases: I) busca de indicadores de animais, o sentimento animal, II) processamento de um banco de dados de animais de companhia e de estimação identificados com microchips em Bogotá. Resultados: I) Encontramos apenas um indicador sobre a opinião o sentimento dos cães e gatos utilizado na "Encuesta de Factores Culturales Asociados de la sintiencia de Factores Culturales Asociados à Relação entre Pessoas e Animais" aplicado em Bogotá. Este é um indicador de impacto que visa demonstrar o estado da cultura cidadã no que diz respeito à relação com os animais. II) O banco de dados contém registros de 206.706 cães e gatos. Quase metade dos animais de companhia que até agora têm um microchip estão no estrato sócio-econômico. Conclusões: é afirmada a necessidade de transformar a relação entre animais e humanos, para que os cidadãos mudem suas práticas diárias e exijam que eles suas práticas diárias e exigem ação imediata de seus governos para a proteção de todos os animais.

Palavras-chave: Animais; Sentimento; Políticas públicas; Proteção dos animais; Indicadores sociais.

Introduction

Cartesian thought separated nature from man and generated the idea that animals are courses to be exploited and exploited by human beings. This led to an anthropocentric conception of the use, abuse and exploitation of animals for food, clothing, work, "sport" (if we can call hunting and fishing for entertainment), bullfighting, circuses, experimentation, surveillance, tourism, etc. However, since the second half of the 20th century, this slogan began to be strongly criticized by animalists and some ecologists and environmentalists. In 1977, in London, the Universal Declaration for Animal Welfare (DUBA) was proclaimed, which was later approved by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and by the United Nations (UN) in 1989 (Foy, 2014). This document recognizes that animals are sentient beings that deserve special consideration and respect. The DUBA opened the public debate on a large scale about animal sentience, although it is not a binding declaration, and in Colombia it is not part of the block of constitutionality.

The affirmation of animal sentience has been driven by scientific developments that have made it possible to discover how the nervous system works in a large number of animals, which has revealed that most of them are beings that can feel pain, suffering, satisfaction, tranquility, among other emotions (Proctor, Gemma and Cornish, 2013). This new knowledge has rethought the idea that animals were things or property of their owners, a fact that was explicit in Colombian laws. Along with these scientific advances, there have been regulatory changes in various countries around the world and cultural transformations in the way animals and humans relate to each other.

These social changes are reflected in human relationships with companion animals, which have been taken into account in most of the few public policies that exist on this subject. The correspondence with these animals is not only given by the coexistence with them, but also by situations of abandonment, mistreatment, stray animals, events of public health interest, among other aspects.

The objective of this reflection article is to show how the concept of animal sentience is part of the Public Policy for Animal Protection and Welfare of Bogota 2014-2038, and how it is measured from some social indicators.

Theoretical framework

There is an academic debate around animal sentience that is reflected in different concepts such as animal welfare; for Foy (2014) this refers to the dignified treatment of animals, but assumes that in any case they will be used by humans. Criticism of this view is based on the fact that it does not recognize animals as sentient beings and, therefore, naturalizes their exploitation.

The dignified treatment of animals is based on the five animal freedoms, called by other rights or needs. These were stated in the DUBA and are as follows (Carreño, 2017, p.25):

- Need not to suffer from hunger or thirst: constant access to fresh water and a diet to keep them vigorous and in good health.

- Need not to suffer discomfort: providing an appropriate environment including shelter and a comfortable resting area.
- The need to be free from pain, injury and disease: through prevention, prompt diagnosis and necessary treatment.
- Need to be free from fear and pain: ensuring conditions and treatments that prevent mental suffering.
- Need to be able to express their normal behavior: by providing sufficient space, appropriate accommodations and companionship with animals of the same type.

These freedoms have been designed for companion animals as well as for production and working animals, which are those that should be under the care and protection of human beings. For this reason, most of the scientific literature on the subject of animal welfare focuses on the meat, dairy, equine, ovine, goat and poultry industries, with a zootechnical approach. Hence, animal welfare is criticized by anti-speciesists for being a position that does not free animals from exploitation or death. On the contrary, it perpetuates these practices under the idea of a progressive dignified treatment. Antispeciesists animalists propose that the conception of the supremacy of humans as a species over animals be abolished (Foy, 2014), in addition, they argue that "the way we deal socially with animals is defined according to the cultural values of society" (Mugrabi and Goldim, 2014, p.53), so this is an approach that can be studied in sociology, but that has been analyzed more in philosophy and law.

Now, Padilla (2018) states that there are no clearly demarcated ideological and theoretical lines, as there is no consensus on how to define animals and their moral consideration. This author quotes Horta to give a concept of sentience:

Sentience is defined as the capacity to feel pain and pleasure, to suffer physically and emotionally and to have experiences of affliction and well-being. More precisely, to experience, experience and qualify as good or bad what happens to us. That is why we call suffering, not only the physical pain we feel when we hurt ourselves, but also any experience that is bad for us; for example, emotions such as fear, grief, anguish, dissatisfaction, frustration or discontent. Likewise, we call enjoyment, not only physical pleasure, but any positive experience; for example, joy, tranquility and bodily wellbeing. (Horta, 2017 in Padilla, 2018, p.158).

For their part, Mugrabi and Goldim state that "the capacity to perceive or sense is one of several types of consciousness. Sensing refers to the response of the central nervous system to activate the peripheral sensory system. Sentient is one who has his or her own experience of life" (2014, p.49). These definitions reflect the complexity of delimiting these concepts, since sentience, perception and sensitivity are related to the subjectivity of animals and, given that this has been studied in humans, mainly through verbal language, for the animal world other approaches are required to account for it.

At present, with scientific developments, it is known that animals are sentient beings, or in other words, capable of conscious experience and therefore deserve moral consideration (Padilla,

2018). Progress has been made in the consensus of considering vertebrate animals as sentient beings, which is why in several countries they are afforded protection to varying degrees. However, the same is not true for invertebrates, even though there are studies that show that animals such as octopuses, crabs and squids are sentient beings (Mugrabi and Goldim, 2014).

These ethical dilemmas then lead to the question of whether human beings should protect animals and not use them. In this regard, one of the main arguments is that human beings are an animal species, only one among all the animal species that exist and that, therefore, on the basis of their greater capacity for reasoning, they have a moral duty to protect other species. In other words, this proposal is a critique of anthropocentrism and a call for its abolition, "it could be said that this proposal is an effort to confront the prejudices that subordinate other animals in a moral hierarchy built to justify the countless human practices based on their exploitation" (Padilla, 2018, p.157).

For both human and non-human animals, the primary interest is to live without suffering and in conditions of well-being. Therefore, the primary interest for both human and non-human animals is to live without suffering and in conditions of well-being:

Moral injury to a sentient being refers to harm or aversive experiences such as pain, suffering, fear, anguish, frustration or death, which infringe on its interest in enjoying a satisfactory life, developing its capabilities and performing its natural behaviors (Padilla, 2018, p.159).

In addition, the above has legal implications: the recognition of the capacity for sentience is "the 'threshold condition' for recognizing a living being's moral status or for admitting it into "the community of beings holding rights based on justice" (Nussbaum, 2007 in Padilla, 2018, p.157). For this reason, changes in laws are happening in various countries to include animals as sentient beings. Colombia is one of them.

However, a bibliographic search on animal sentience and how this is reflected in the development of different public policies in Colombia reveals the difference between companion animals, animals for work and industry, and urban and wild fauna. Culturally, there is a predilection to provide protection and welfare almost exclusively to companion animals, a situation that is due to speciesism, that is, to prefer certain animals over others, for example, the life of a dog over that of a pig, which is mostly considered as food. This has several implications. On the one hand, making public policies for animal protection and welfare requires taking all animals into account, which causes multiple interests to conflict in the debates on the formulation of such policies. On the other hand, it calls for the development of different social indicators focused on farm animals, urban wildlife, companion animals, etc.

There are other concepts that need to be clarified. In most documents and in the imagination of people, the term "pet" is used, but the animal movement in recent years has made an effort in education and communication to rethink the use of this term, assuming that language mediates in the construction of realities. According to the dictionary of the Royal Academy of the Spanish Language, the word pet in its first definition says "person, animal or thing that serves as a talisman, that brings good luck" (RAE, 2021), which implies the reification of animals in the domestic environment, a situation that implicitly denies their capacity for sentience. Hence, animalists propose the use of the term "companion animals". It is even proposed not to speak of "owner, proprietor or holder" of the animal,



but of "responsible or guardian", that there is no talk of "responsible possession" but of "responsible coexistence". In this regard, in the official documents of the national government (for example, the two guidelines prepared by Carreño (2017; 2018) for the Ministry of Health and Social Protection) and in the public policies so far formulated in the country, the term "companion animals" or "domestic animals" prevails, but the terms "responsible tenure" and "owner, proprietor or holder" are still used. An advance in this sense has been the modification of the term "potentially dangerous dogs or breeds" to "dogs or breeds of special handling" and "municipal animal shelter" to "municipal shelters for wildlife" (Universidad del Rosario, 2020). Even so, there is still a long way to go regarding the appropriate use of language that builds other imaginaries about human-animal relations.

In fact, the coexistence between humans and companion animals is a phenomenon that only in recent years has attracted the attention of professionals from different areas of knowledge, which is why sociological research and available data and indicators are scarce. At present, we are living a moment of social transition towards the reflection of behaviors regarding the consideration of animals as sentient beings and, since it is a cultural change, this conversion is slow and different according to the territories. In Colombia, Bogotá is ahead of the rest of the cities and municipalities in the country, both in terms of the research conducted and the institutional strengthening for animal protection and welfare, the animal welfare social movement, developments in public policy, the availability of databases, etc.

Therefore, one of the first steps taken by countries interested in the protection of companion animals is their identification with microchips. In this respect, there are great advances in countries such as Spain, Canada, England, the United States and Mexico (Durán, 2004). In Colombia, some cities are beginning to implement it; however, it is not mandatory and this is due more to the interest of companies in selling microchips than to the government's interest in promoting programs for the protection of companion animals, specifically canines and felines. In Bogota, this is one of the actions outlined in the Public Policy for the Protection and Welfare of Animals 2014-2038 (Decree 242, 2015) and which began its implementation in all localities of the capital.

The identification of the canine or feline with a microchip gives the animal access to "4-legged citizenship", as this program has been called in Bogota (IDPYBA, 2019a). These devices store information such as the caregiver's contact details, address and unique identification number, which allows the animal to be unequivocally associated with its guardian. Some of the objectives of using microchips in companion animals are to reduce abandonment, prevent theft or illegal trade, and avoid mistreatment and unjustified slaughter (Durán, 2004).

In economic terms, the design and implantation of microchips is a business that has great potential for growth, given that more and more countries are adopting in their legislation the obligatory use of microchips in all companion animals in order to have censuses and databases and thus monitor the welfare of the animal and compliance with laws against mistreatment (Durán, 2004). It is also useful for those who sell or buy pedigree animals, since the microchips can store information on their family tree and thus certify the purity of the breed and the legality of the animal's "ownership" (Durán, 2004). This author points out that in a few years these artifacts could include: veterinary clinical history, reminders of appointments, vaccinations and deworming, information on the animal's heart rate, the deposit of medications such as insulin to be released according to the patient's needs, and GPS location; in addition, they could have applications in profitable industries such as livestock farming (Durán, 2004).

The abandonment of companion animals and their uncontrolled reproduction generate public health problems such as zoonosis, road accidents, among others. In addition, the street situation generates mistreatment, suffering and lack of protection for these sentient beings. In Mexico City, one of the proposals to address this problem has been the use of microchips in canines, with the purpose of reducing the number of stray dogs and promoting responsible care and adoption; this technology began to be used by animal protection associations, independent protectors, veterinary clinics and responsible caregivers (Muro et al., 2016).

Territorial context and public policy

Bogota is the Colombian city with the greatest progress in terms of animal welfare and protection, both for domestic and wild animals. In 2015, through Decree 242 of June 22, the District Public Policy for Animal Protection and Welfare 2014 - 2038 was approved, which is based on the recognition of the sentience capacity of animals and, therefore, of their moral consideration. The main objective of the policy is:

To transform the relationship between human and non-human animals in the Capital District towards a culture of good treatment and respect for the latter, based on their recognition as sentient beings and their own worth, which is independent of human interests. (p.38-39).

Likewise, the vision that decrees this public policy is:

By 2038, the Capital District is practicing a civic and institutional culture that recognizes animals as sentient beings, which have a value independent of human interests; that enrich the environmental, psycho-affective, ethical, social and cultural dimensions in the capital; and deserve respect, care and welfare from the whole society to achieve a harmonious coexistence between human and non-human animals. (p.37).

This policy consists of three axes, one of which is the civic culture for the protection and welfare of animals. One purpose of this is to transform the cultural factors that determine the relationship between humans and animals so that there is harmonious coexistence and animal welfare is guaranteed.

In order to draw up the action plan, it was necessary to know the current state of the phenomenon, so the Mayor's Office was entrusted with the creation of the Observatory for the Protection of Animal Welfare and with the responsibility of creating indicators that would serve as diagnostic information for this policy (OPYBA, 2020). It is in this context that the "Survey of Cultural Factors Associated to the Relationship between People and Animals in the year 2019" is designed and executed, and within this, some variables are included that correspond to the factor "Empathy towards Animals". The objective of the latter is "to identify attitudes, knowledge, practices and emotions that determine the relationships between people and animals, and to generate indicators of citizen culture for cultural transformation" (OPYBA, 2019, p.2). For this purpose, four dimensions were set: animal sentience, presence of animals in common spaces, solidarity towards animals and definition of "pet".

Thus, the indicator "Recognition of Animal Sentience" is one of the indicators that contributes to measure the attitudes and knowledge that the inhabitants of Bogota have regarding the sentience capacity of animals. This is one of the variables that are weighted in the "Index of Em-



empathy towards animals" (OPYBA, 2019a, p.8). Empathy depends largely on understanding the feelings of the other, so knowing whether people recognized the sentience of animals was important, especially since the survey did not discriminate between people who did or did not live with companion animals (OPYBA, 2019b).

With this information, the District, the authorities in charge, universities and animalistic NGOs can carry out actions (mainly educational and social mobilization) that have an impact on social practices that result in the transformation of human-animal relations. In addition, they can monitor compliance with public policy. This indicator is significant in a city such as Bogotá, which has made institutional improvements in favor of animals and which also has a strong animal movement that lobbied for the implementation of the public policy mentioned above, in addition to participating in the roundtables for its construction and monitoring the commitments made therein.

On the other hand, the OPYBA, which is part of the District Institute for the Protection and Welfare of Animals (IDPYBA), was charged by the aforementioned public policy with adopting, updating, coordinating and coordinating an information system that would optimize the management carried out for the benefit of the district's fauna.

Thus, the OPYBA is carrying out campaigns to identify all pets in the capital city. Since there are no censuses, one of the strategies is to create a single registry of companion animals through the installation of an identification microchip. Its implementation is in charge of the district government that has several purposes (Alcaldía de Bogotá, 2018):

- Identify, register and keep track of the city's companion animals (dogs and cats).
- Identify the data of the person responsible for the animal, which are registered in the micro-chip.
- To locate the animal more easily in case of theft or loss, which is achieved by reading the microchip on which the contact number of the responsible person can be found.
- Reduce the number of abandoned animals.
- Conduct a census of canines and felines.

This program is known as "4-legged Citizen", in charge of IDPYBA and is directed free of charge to strata 1,2 and 3 for which the Institute carries out workshops in the different localities for people to bring their pets to have the microchip installed (Alcaldía de Bogotá, 2019a). However, the population of the other strata can pay for its implantation. This is one of the 16 projects prioritized in the Development Plan of the "Better Bogota for All", in addition, the following benefits of the information system are stated (IDPYBA, 2019b, paragraph 6):

- Turn companion animals into 4-legged citizens.
- Increase the possibility of finding animals in cases of loss.
- Report animals found without a keeper/holder in public space.

- Discourage the theft and subsequent sale of canines and felines.
- Maintain updated base valuation information for each active animal within the system.
- Collaborate with the respective authorities to penalize the abandonment and/or possible mistreatment of companion animals.

However, it is worth clarifying that the microchip does not function as a locator because it is not a GPS.

METHODOLOGY

Two phases were developed: I) search for indicators of animal sentience, II) development of a database of companion animals identified with microchips in Bogota.

In the first phase, a documentary review was conducted in Colombia on the existence of indicators that measure any social phenomenon related to animal sentience. This search was carried out in databases of scientific articles, open data pages, databases of population surveys conducted by different governmental institutions such as DANE and public policy documents on animal protection and welfare. In this regard, only one indicator was found for which a single exploratory measurement has been made in Bogota through the "Survey of Cultural Factors Associated with the Relationship between People and Animals", developed by OPYBA in 2019. Then, we proceeded to search for similar indicators in other countries, so that we could compare the data obtained in Bogota with other cities, as well as find indicators that could be complementary. This search was carried out in databases of scientific articles and in official pages of animal rights organizations.

In the second phase, we searched for databases that had information on social phenomena related to animal sentience, so that the data could be processed statistically. Only one database related to the implementation of microchipping in companion animals in Bogotá was found. The method used was retrospective cross-sectional descriptive with data from secondary sources. The website from which the information was taken was Datos Abiertos Bogotá (Alcaldía de Bogotá, 2019a).

There it was possible to download an Excel file containing information on the following variables: microchip number (15 digits), date of microchip implantation, species (canine, feline), sex (female, male), breed, name of the animal, date of sterilization, locality, stratum. The file contains data corresponding to 206,706 companion animals. Descriptive statistics analysis was then carried out using measures of central tendency and calculation of proportions with the Excel program. Likewise, the information on stratum 2 by locality was georeferenced and a map was generated using the Qgis program.

ANALYSIS

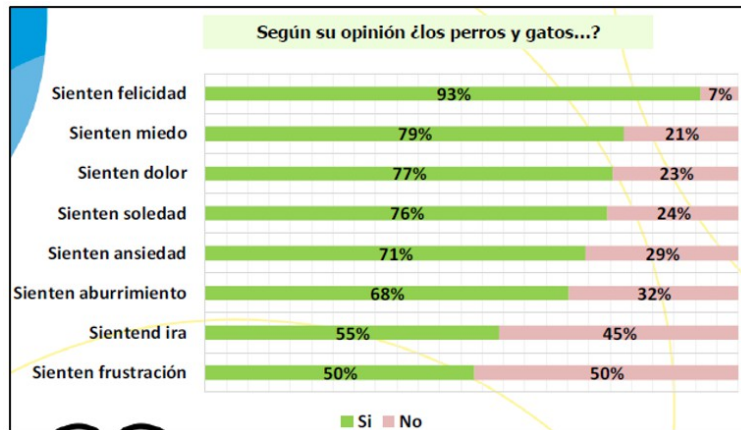
I) Phase of search for indicators of animal sentience:

The indicator identified was the recognition of the sentience of animals, specifically



dogs and cats (Figure 1). This is part of the "Survey of Cultural Factors Associated with the Relationship between People and Animals", applied to a sample of 3123 people over 13 years of age from all urban localities of Bogotá. The sampling was non-probabilistic by convenience, the respondents were selected by intersection in public spaces and by reference of profiles. The survey was applied between November 12 and December 7, 2019.

Figure 1.
Indicator recognition of animal sentience.



Source: Observatorio de protección y Bienestar Animal (Bogotá). Cultural factors related to empathy towards animals (2019).

In the information search it was not possible to find other indicators that measure the same social phenomenon. This is an impact indicator that seeks to demonstrate the state of citizen culture with respect to the relationship with animals, in this case specifically canines and felines. Although only an exploratory measurement has been made in Bogotá, the use of this indicator by cohorts can show whether the actions carried out within the framework of public policy result in social and cultural changes, which are complex phenomena to measure.

When searching for other information on public policies for animal protection and welfare in Colombia, we found documents referring to proposals for the design of these policies, as in the cases of Yumbo-Valle del Cauca (Martínez, et al., 2015), Cota-Cundinamarca (Carrillo, et al., 2017) and Sibaté-Cundinamarca (Burgos, 2019), but the latter does not have indicators, and the first two have exactly the same matrix of indicators. With respect to Pereira, one of the first cities whose policy was approved in 2011, a document was found that proposed the creation of an observatory to monitor it, which has indicators (Quintero et al., 2019).

What the documents from Yumbo, Cota and Pereira have in common is that they focus on activity indicators, for example: number of socializations carried out on the policy, number of sterilizations of dogs and cats, number of educational institutions that include a project on this topic in their Institutional Educational Project, number of officials trained, number of complaints of animal abuse, among others. And some result indicators, for example: percentage of animal-drawn vehicles replaced, percentage of establishments with animal sales visited and monitored, etc. Unfortunately, none of these indicators shows the impact of policy implementation, and it seems that no municipality has a baseline, as Bogotá is trying to do with

the "Survey of Cultural Factors Associated with the Relationship between People and Animals 2019", let alone with indicators about animal sentience.

In the search for databases of scientific articles, animal welfare indicators were found that referred only to the poultry, dairy and meat industries, or to horse farms, that is, to the exploitation of animals such as cows, pigs, chickens and horses, but only from a questionable welfare conception, since the category of sentience is not contemplated.

On the other hand, the first citizen survey on animal protection and welfare 2020 was found in the Mexican state of Quintana Roo (Castañeda and Souza, 2020). This was conducted, like the one in Bogota, to draw a baseline for public policy that would allow authorities to make decisions. However, it focuses only on the "responsible ownership" of dogs and cats, without at any point inquiring about citizens' recognition of the sentience capacity of animals.

It is worth noting that, in 2017 the National Planning Department (DNP) made the launching of the Animal Welfare Public Policy for Colombia, which was expected to be adopted through a CONPES, however, as of today such policy does not exist despite the fact that it is a duty consigned in the National Development Plan 2018-2022. In the document of the launching of such policy, the DNP showed some indicators of the global and national panorama on the matter. There, the Animal Protection Index is mentioned, which could be a complementary indicator to that of the perception of dog and cat syncytia (DNP, 2017) (Figure 2). However, this is calculated by country and is not a perception indicator.

Figure 2.
Animal protection index Colombia



Source: (DNP, 2017).

However, the DNP took the 2014 indicator and the World Animal Protection (WAP, 2021) made methodological improvements to this index. This currently consists of four objectives composed of various indicators. Objective 1 "Recognition of animal sentience and prohibition of animal suffering" in its indicator 1 measures the following:



Animal sentience is formally recognized in legislation'. A country will score 'A' for this indicator if its legislation contains: full formal recognition of sentience in the law applicable, as a minimum, to all vertebrates, cephalopods and decapod crustaceans. This formal recognition of sentience should be enshrined in animal welfare legislation as well as in the country's Civil Code. (WAP, 2021, paragraph 14).

In the 2020 Animal Protection Index measurement, Colombia was placed in category D and for objective 1, indicator 1, it obtained category A (WAP, 2020). It is important to note that this indicator is based solely on analysis of legislation and does not report people's perception of relations with animals, nor their knowledge or belief in sentience. Therefore, it is an indicator that can be considered complementary to the one used in Bogota.

Finally, there are several limitations of the indicator "recognition of animal sentience" (dogs and cats) measured in the capital:

- Cost and difficulty of measurement: in order to collect information, surveys of the city's inhabitants must be conducted, which is costly and difficult in logistical terms.
- Frequency of measurement between cohorts: due to the previous reason, it is likely to be measured few times because local authorities have scarce resources for this type of population surveys. This means that the data are not constantly updated.
- Comparability: given that for the moment it is only an indicator used in Bogota, it is not comparable with other cities or municipalities.
- Speciesist: only inquires about the recognition of the sentience of dogs and cats.
- Assumption: it is assumed that the recognition of animal sentience conditions human treatment of animals, hence the interest in measuring this phenomenon. However, opinion (the term used in the question) is one thing and practices are another. Human beings are not always coherent beings.
- Incipient development: ethical and legal advances on animal sentience are recent and these discussions are not yet taking place in all countries. Even in many municipalities in Colombia there is a lag in this issue. This prevents the application or development of social indicators to measure this phenomenon. There are also scientific discussions about which animals have the capacity to feel and which do not.

II) Processing phase of a database of microchipped pets in Bogotá.

194

The database of companion animals identified with microchips in the different localities of the capital contains records corresponding to 206,706 animals. Table 1 shows the results of the measures of central tendency for the stratum variable.

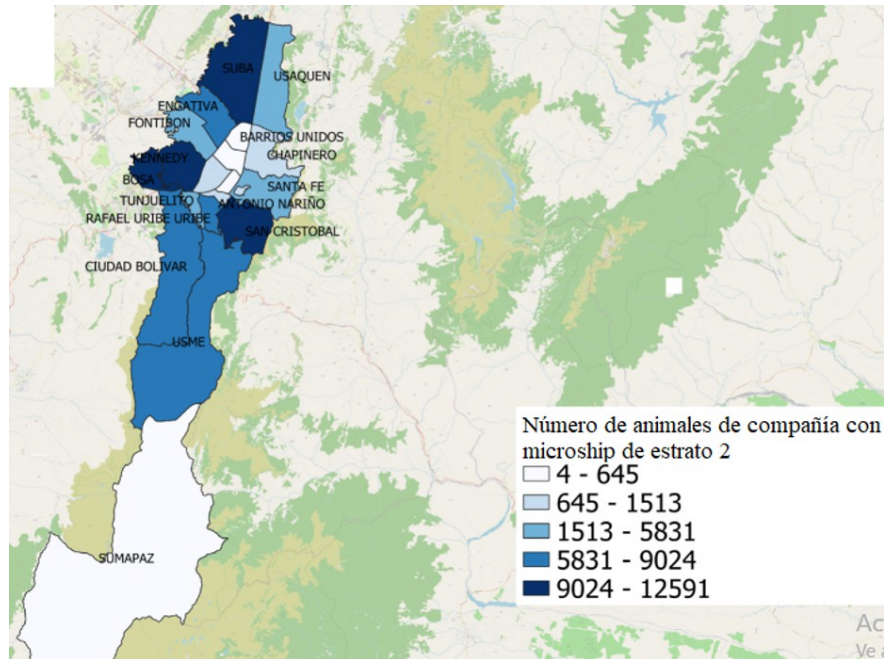
Table 1.
Measures of central tendency for the stratum of pet animals identified with microchips in Bogotá.

Variable	Result
Media	2,1230008
Median	2
Fashion	2
Standard deviation	0,8398521
Range	6
Minimum	0
Maximum	6
Confidence level (95.0%)	0,0036206

Source: Office of the Mayor of Bogota (2019b).

These data indicate that the stratum with the highest number of registered microchipped companion animals in the capital city is stratum 2. Figure 3 shows the georeferencing of pet animals with microchips in stratum 2 in all localities of Bogotá.

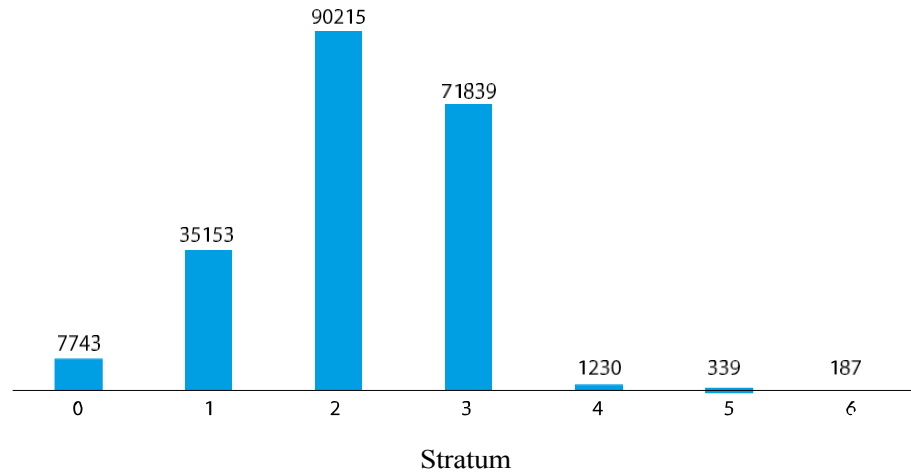
Figure 3.
Pets with microchip for estrato 2 in all localities of Bogotá.



Source: Own elaboration in Qgis based on data provided by the Mayor's Office of Bogotá (2019b).



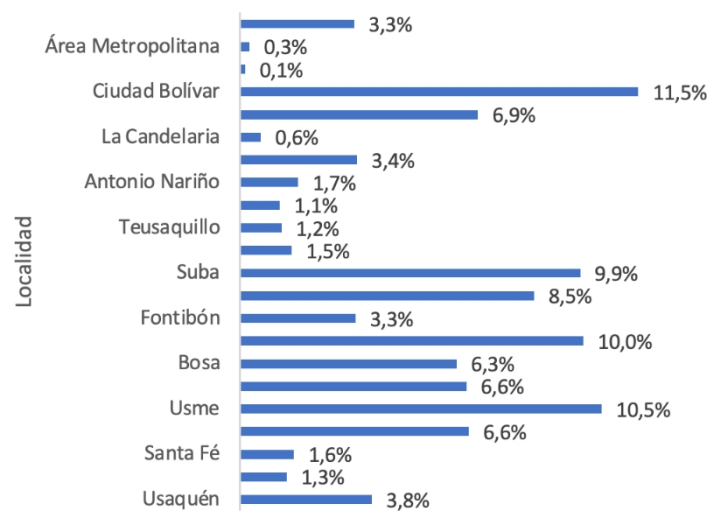
Figure 4.
Number of pets identified with microchip by stratum.



Source: Own elaboration based on data provided by the Mayor's Office of Bogota (2019b).

This graph shows that by far the largest number of pets identified with microchips belong to stratum 2, followed by stratum 3 and stratum 1. This is due to the guidelines adopted in the Public Policy for Animal Protection and Welfare in Bogotá, since these are the strata that are targeted for subsidizing the cost of the microchip. In percentage terms, stratum 2 corresponds to almost half of the pets that so far have a microchip implanted. Perhaps the campaigns for identification with this device have been better received by people in this stratum, or the places where the procedure has been performed, such as authorized veterinary clinics, are mostly located in stratum 2 neighborhoods, which facilitates access to this population.

Figure 5.
Proportion of pets identified with microchip by locality in Bogotá.

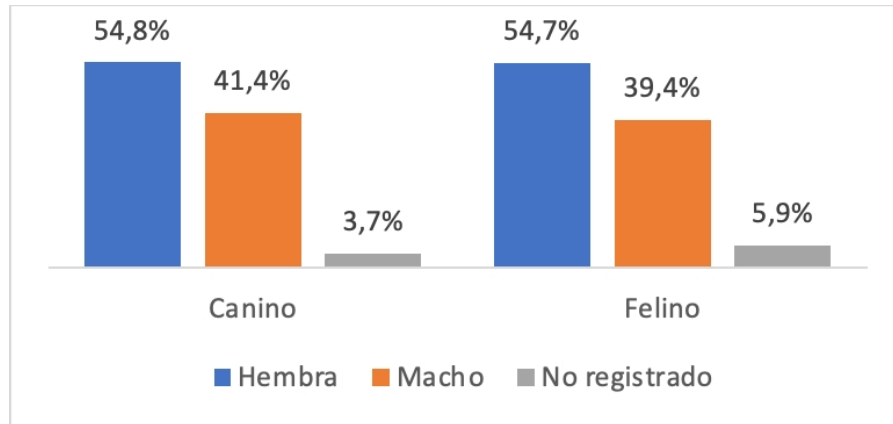


Source: Own elaboration based on data provided by the Mayor's Office of Bogota (2019b).

This information is useful for those in charge of executing these campaigns, as it allows them to visualize the coverage and take actions with respect to which localities need greater reinforcement in communication of the pet identification strategy.

Figure 6.

Sex ratio by species of companion animals identified with microchip.



Source: Own elaboration based on data provided by the Mayor's Office of Bogota (2019b).

The graph shows that there is a greater population of females, both canines and felines, that have been identified with microchips. This information is also useful for targeting sterilization campaigns. In this regard, in the processed database there are 51,598 animals for which there is no record of whether they are sterilized or not.

Finally, there are some limitations of the microchip companion animal identification indicator:

- **Comparability:** given that for the moment it is only an indicator used in Bogota, it has no comparison with other cities or municipalities in the country. In addition, the campaigns carried out by the District have been focused almost exclusively on strata 1, 2 and 3, so the other strata have not received sufficient information to motivate them to voluntarily implant the microchip in their pets. Likewise, it is not known whether dog and cat shelters have received support on the subject.
- **Speciesist:** only inquires about the identification of dogs and cats.

CONCLUSIONS

At present, it is possible to evidence the change in the relationship between humans and companion animals, which leads to reflect on various dimensions of these relationships and the need for indicators that show the phenomenon. Since this is an emerging issue in the social, environmental and health sciences, there are few indicators that account for animal protection and welfare. The closest indicators have been limited to the welfare of commercially exploited animals. But cultural changes, thanks to the recognition of animal sentience, create the need for a new approach to animal welfare.



the need to broaden the perspective of analysis of the relationships between human and non-human animals.

In this regard, it should be noted that the progress made by Bogota regarding the inclusion of animal welfare in the Public Policy for the Protection and Welfare of Animals in Bogota 2014-2038 (Decree 242, 2015). In the documentary review conducted for the preparation of this article, only one indicator was found to measure the perception of citizens regarding canine and feline sentience, as part of the "Survey of Cultural Factors Associated with the Relationship between People and Animals" that serves as a baseline for the implementation of the policy. A complementary indicator is the Animal Protection Index developed by World Animal Protection, which measures whether animal sentience is formally recognized in the countries' legislation. These advances show the need to formulate social indicators that accompany the design of public policies on the subject, so that the relationship between humans and animals is known, and strategies can be developed to generate a culture of animal protection in societies.

On the other hand, this article shows that today progress is being made in information systems for the identification of canines and felines, which other countries such as Spain have already consolidated. In this regard, Colombian territorial entities should invest in education and communication programs to ensure that people assume responsibility in the coexistence with companion animals. In this regard, one of the first steps is to ask the guardians responsible for dogs and cats to have them implanted with microchips, as a way of persuading them to avoid abandonment and mistreatment, since the device reveals the name of the person responsible for the animal.

However, it should not be forgotten that there are thousands of animals in shelters and on the street, which are the responsibility of the State, not only for identification with microchips, but for all actions related to their care and protection, such as sterilization, vaccinations, deworming, adoption campaigns, rescue of stray animals, among others.

Likewise, progress must be made in the transformation of the culture regarding the relationship between humans and animals, so that citizens, aware of animal sentience, demand immediate actions from their governments for the protection not only of companion animals, but also of urban and wild fauna, and of those animals used in production.

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