Xinyue Selina Wang

Professor Ryan Napier

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The Practicality of Trap-Neuter-Release Programs in China

Walking down the streets of any residential complex in Shanghai or Beijing, you will most likely see cats peeking out of trash cans, hear their loud "meow"s through the bushes, or see cats sprinting across the road between passing cars. The growing population of these outdoor cats has become a severe problem not only for the welfare of the cats but also for the residents in the cities. According to Shanghai Daily, in 2015 there were approximately 1.3 million homeless dogs and cats in two of China's largest urban cities: Beijing and Tianjing (Ke). Many methods have been proposed to reduce the feral cat population in urban cities in China; the two main methods are euthanasia and Trap-Neuter-Release (TNR). Euthanasia involves trapping and killing feral cats and has traditionally been the most commonly used method to control feral cat population. However, this method has raised many controversies regarding the moral issues of killing animals. Therefore, TNR has become increasingly popular and promoted by animal lovers as a humane alternative to euthanasia. TNR involves trapping and neutering feral cats, and then releasing the cat back into its colony after cutting the tip of the cat's ear to signify that this cat has been neutered. Although TNR should theoretically control feral cat population, it is less economically desirable than euthanasia. More importantly, because China lacks a well-developed basis, in terms of both government funding and public awareness, to support animal welfare, the practicality of TNR in China is questionable.

There are two main types of outdoor cats: feral cats and stray cats. The main difference between them is that stray cats are socialized to people while feral cats are not. Overtime, stray cats can become feral. Feral cats pose a greater problem because it is difficult for them to be adopted and become pets. Because they live in extremely harsh conditions, they often do not live long and die of injuries or diseases. They threaten wildlife because they prey on birds, other small animals and species that may be endangered, therefore disrupting the original ecosystem. Feral cats also disrupt the neighborhood because male cats spray urine that give off strong smells and create excessive noise during fighting and mating. TNR can help reduce these nuisances because neutering cats results in less reproduction and decreased cat population in the long run. It also decreases sexual activity and fighting between cats, thus reduces the noises caused by feral cats.

Many studies done on a small scale show that TNR can be successful in controlling cat population. Levy et al. conducted a 11-year-long study to track a TNR program on a college campus in Florida. Their results showed that the feral cat population decreased by 66%. Similarly, a study by Natoli et. al showed that a TNR program in Rome, Italy decreased the feral cat colonies by 16-32%. It is apparent that TNR should be able to reduce feral cat population; however, most studies done on TNR focus on developed countries that already have a well-established animal welfare system and a well-educated general public. Many characteristics of China differentiate it from developed countries, making TNR less practical in China.

To this day, China does not have any law protecting the welfare of stray and feral animals. Most TNR programs in China are carried out by local animal shelters run mainly by volunteers, receiving no funding from the government and relying mainly on donations. Because of this lack of funding, the costs required to carry out TNR is one of the most important factors that

determines whether or not TNR is practical. Lohr et al. conducted a study comparing the cost effectiveness of TNR and euthanasia in Oahu, Hawaii. He focused mainly on the effects TNR has on the local bird population. The results showed that euthanasia is less costly than TNR. Not only so, the benefits associated with TNR did not even exceed the costs required to implement it. Andersen et al. used population matrix models to estimate the effects of TNR and euthanasia on cat population and found that in order to achieve effective population control, at least 50% of the population need to be euthanized, or at least 75% need to be neutered. This shows that TNR requires much more effort than euthanasia, and therefore requires much higher costs. This makes it economically undesirable to implement TNR instead of continuing to use the traditional method of euthanasia.

Some suggest that the biggest benefit of TNR is that it is more humane than euthanasia and that this should also be taken into account in the economic evaluation of the costs and benefits of TNR; TNR raises fewer moral issues, thus has the benefit of having a lower social costs than euthanasia. However, the social cost raised by moral issues is almost impossible to quantify. Even if these social costs do get recognized, the government would need to provide funding to offset the costs of implementing TNR. In a country that lacks even the most basic animal welfare laws, it is highly unlikely for the government to spend extra money on a program just for the sake of treating feral cats more humanely.

This lack of government support for animal welfare also means that the country in general lacks a well-established system to deal with feral animal related issues. As a result, most animal protection work is done by volunteers who have not been properly trained, and lack an official network of support. According to Mary Peng, co-founder of the International Centre for Veterinary Services, “We don’t have an industry where you have animal shelters that are legally

licensed NGOs with non-profit status" (Lisa Gay). Peng also points out that many local animal protection associations lack the appropriate equipment to humanely capture the cats. Without a well-organized system, it is difficult for volunteers to be committed to carrying out TNR for a long time on a large scale. However, the key to TNR is that it is only effective in the long run. Using the two previously mentioned studies as examples, Levy's study involved continued TNR for 11 years, while in Natoli's study the cat population did not decrease in the first three years and it took at least 6 years to see a drop in population of around 32%. TNR programs that cannot sustain themselves over many years is simply a waste of time and money.

Another important problem caused by the lack of a well-established system is that the system of caring for and adopting stray and feral cats is also very undeveloped. In Levy's study, the decrease in cat population was not only due to TNR, but also because as part of the program, kittens and tamed cats were being adopted. This, however, is impractical in China where even the animals living in animal shelters are living in harsh conditions and are all waiting to be adopted.

For these reasons, in order to achieve the same effect as shown in many of the studies done in developed countries, animal shelters in China would likely incur even higher costs. They would not only need to pay the costs of trapping and neutering, but also the costs of training volunteers and coordinating a whole system of caring for feral cats. In a country that does not provide any support for animal welfare, this is obviously very impractical.

Even if local animal shelters do develop a system to carry out TNR, there is another fundamental problem that prevents TNR from successfully decreasing China's feral cat population. This is that the majority of the general public lack awareness about the benefits of neutering. As stated by Peng, "The Chinese are deep into a love affair with domestic animals,

creatures that they are reluctant to spay or neuter" (Bruno). Even though there are no official records on the neutering of domestic cats in China, it is reasonable to assume that due to the lack of education about neutering and responsible cat ownership, a large proportion of domestic cats in China are not neutered. Non-neutered female cats often give birth to kittens that are later abandoned. Because of this, abandonment rates in China are quite high, which creates an obstacle for controlling feral cat population. The study done by Lohr shows that the costs of TNR are significantly higher when there is a 10% abandonment rate compared to when there is no abandonment, because more effort is required to achieve the same outcome. The study by Natoli also reveals that even though the TNR program reduced cat population by 16-31%, cat immigration (other cats entering the colony) was as high as 21%, and domestic cat abandonment is a key component that contributes to cat immigration. This shows that if abandonment is not controlled, the success achieved by TNR can easily be eroded by the immigration of new cats into the colony. Natoli comes to the conclusion that TNR alone is not enough for managing feral cat population and that it should be paired with education campaigns to reduce cat abandonment. Trying to control the feral cat population solely through TNR while domestic cats are still reproducing and being abandoned is like trying to bandage a wound that would not stop bleeding; no matter how much effort is put into it, it cannot solve the root of the problem.

In conclusion, in an environment with well-established animal welfare laws and a developed system for animal care, TNR can be an effective method to reduce feral cat population in the long run. However, TNR cannot work in isolation. Given the context of China, it is impractical to implement TNR on a large scale without a supportive government and a well-educated general public regarding animal welfare. This is not to say that TNR should never be used in China. Perhaps it is just that implementing TNR at this stage is too big of leap. Instead of

investing in TNR projects, the focus should be on educating the public about responsible pet ownership and developing a better coordinating system of stray and feral animal care. Once the animal welfare system is well established, TNR would then be able to achieve its maximum effects.

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