

# A LARGE CARNIVORE IN A PERI-URBAN HABITAT: THE GREY WOLF (*CANIS LUPUS*) AROUND PISTOIA. RESULTS FROM A PRELIMINARY SURVEY

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## Introduction

The presence of large carnivores close to human settlements can lead to conflicts and to fear and illegal killing. The grey wolf is common in Italy (1269-1800 individuals, 321 packs Galaverni et al. 2016) and distributed even in proximity of urbanized areas (Bassi et al. 2015). No study examined the awareness of urban residents about the presence of wolves in Apennines. In this study we aimed to measure the knowledge, emotions and attitudes of various stakeholders about wolves, in province of Pistoia (Italy) a geographical area where wolves live in an urbanized landscape with a relatively high human density.

## Knowledge

45.3% of respondents believed that the recolonization of the Apennines by wolves was NOT natural

42.5% of respondents reported to have seen or heard wolves

Poaching (43.8%) and hybridization with dogs (38.7%) were perceived to be the main threats for wolves. Most respondents knew that wolf killing leads to a penal sanction (61.8%).

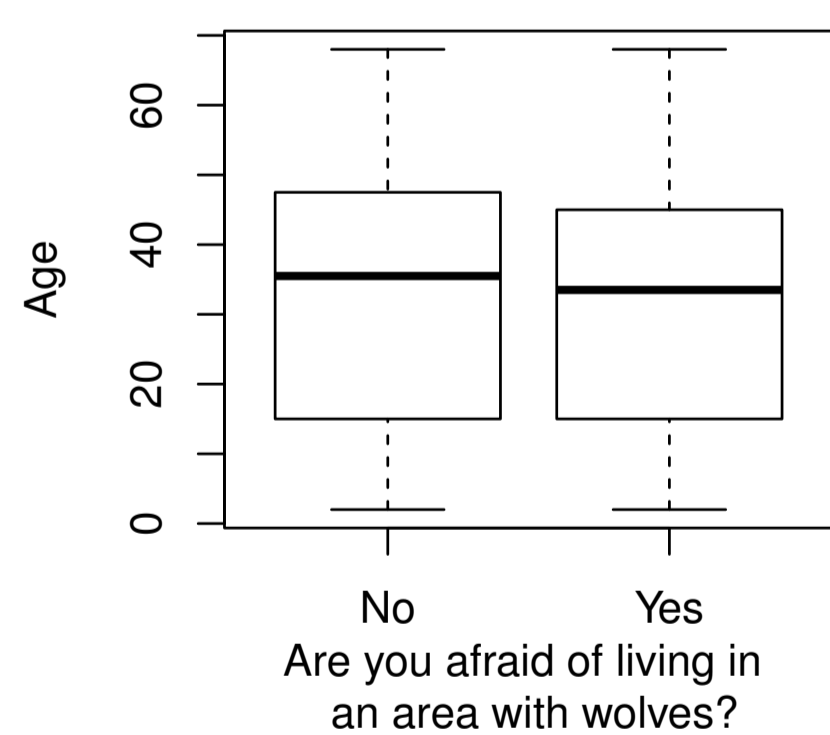
## Emotions

24.6% of respondents were afraid of living in areas with wolves but 66.3% of them would have been happy to spot one

### A generational change?

Respondents who would have enjoyed to see a wolf were younger than the others (see below)

Wilcoxon test  
(W=14340, n.s)



Wilcoxon test  
(W=15331, p<0.05)



### Experience and emotions

Having seen or heard a wolf was not independent from emotions towards wolves (See below)

Are you afraid of living in an area with wolves?

	No	Yes
No	109	167
Yes	53	47

( $X^2=4.92$ ,  $p<0.05$ )

Would you be happy to spot a wolf?

	No	Yes
No	52	48
Yes	105	164

( $X^2=4.49$ ,  $p<0.05$ )

Have you ever seen or heard a wolf?

S  
T  
U  
D  
Y



9

Wolf packs in 2015

22.1

Roe deers/km<sup>2</sup>

303.4

Residents/km<sup>2</sup>

1,2

Deer stagss/km<sup>2</sup>

2014

Starting year of wolf monitoring

2417

Wild boars hunted (2010-2011)

## Materials & Methods

From May 2015 to April 2016 a total of 406 surveys was filled by people who attended informative meetings about wolves organized by Castanea soc.coop in the study area. Average age was 33.6 years, 65% of respondents were men, 79% of them had at least a high-school diploma and 30.5% had a hunting license. Surveys were semi-quantitative, combining open-ended questions, Likert scales and dichotomous questions.

## Attitudes

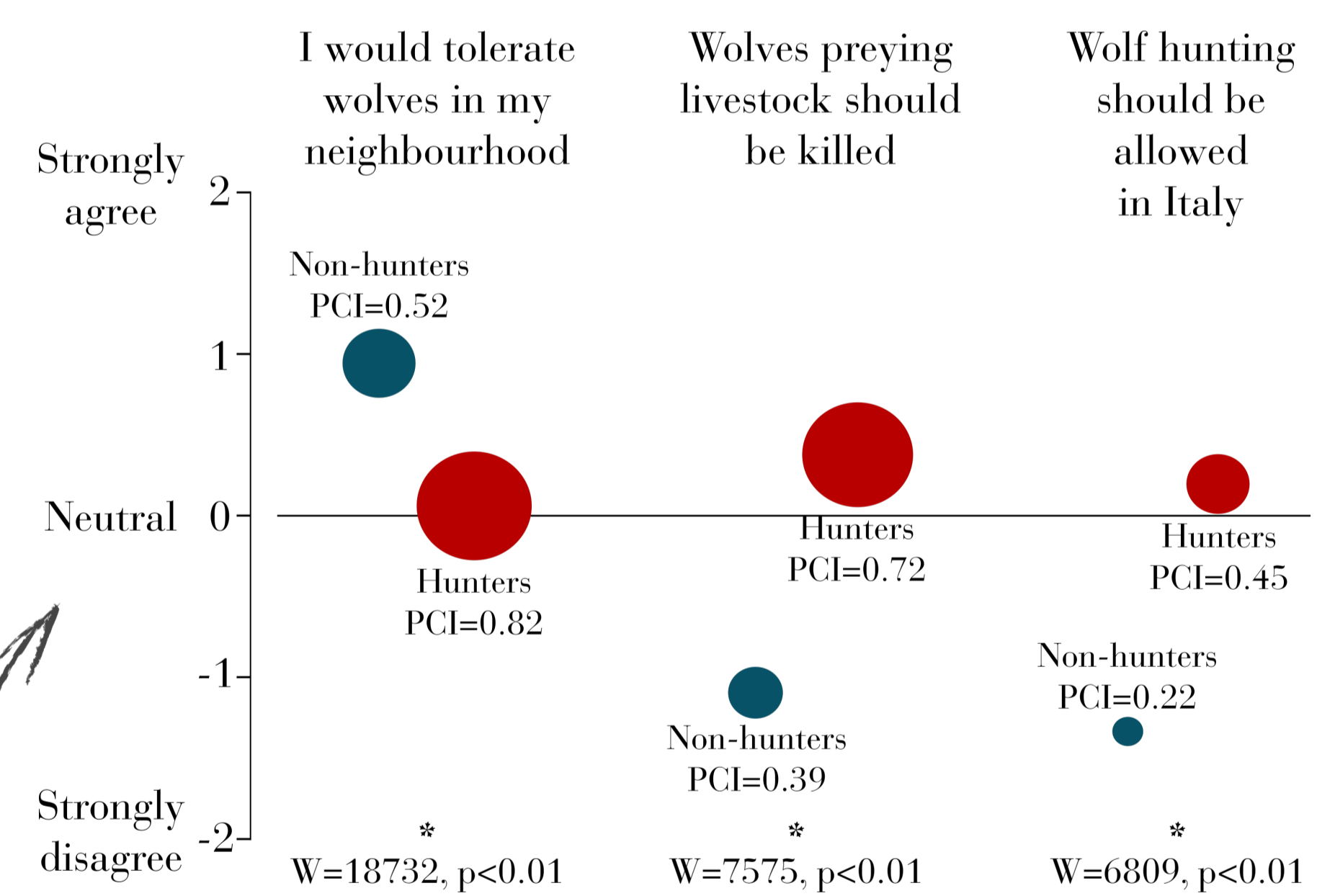
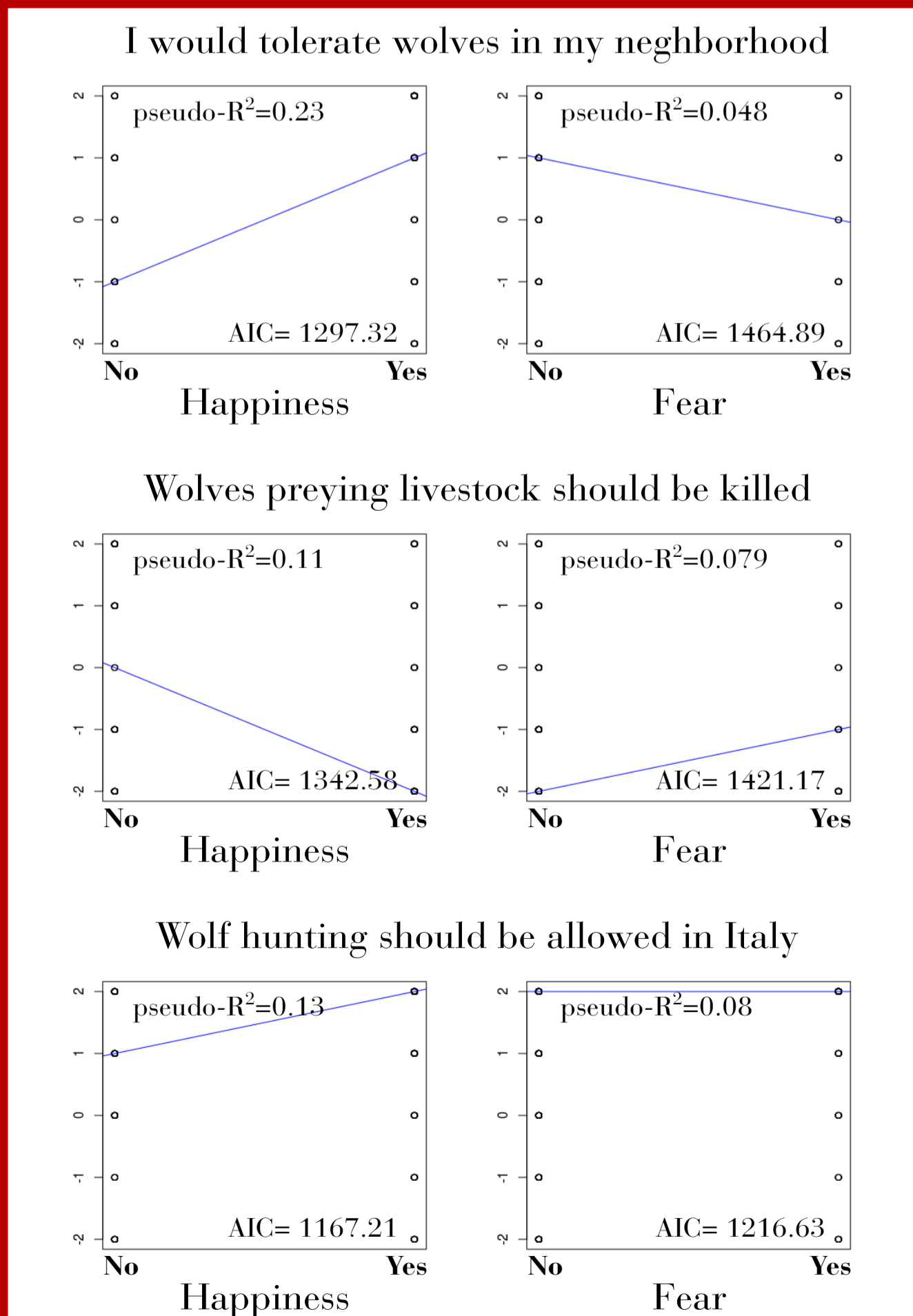
The Potential for Conflict Index (PCI, Manfredo et al. 2003) revealed attitudinal differences between hunters and non-hunters.

Hunters were relatively neutral about wolf hunting, about the numerical control of wolves preying on livestock and about human-wolf coexistence.

Non-hunters believed in coexistence with wolves and did not support wolf hunting and numerical control of problematic wolves. Attitudes of hunters towards wolf management were much more diversified than those of non-hunters, as average PCI were much higher.



## Median regression: emotions towards wolves and attitudes about their management



PCI Size of the bubble: level of disagreement in a nutshell Y of the bubble: average value

## Conclusions

Emotions interact with experience of wolves and maybe a generational change in emotional dispositions is occurring in the study area. There is definitely more than fear (Jacobs et al. 2014) behind human attitudes towards wolves, as shown by the predictive potential of happiness for attitudes about wolf management.

Hunters and non-hunters have different attitudes towards wolf management, yet hunters lack of consensus and future studies should explore internal differences.

## References

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