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This is the author's manuscript

Original Citation:

Availability:

This version is available <http://hdl.handle.net/2318/1875919> since 2022-10-06T13:38:50Z

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(Article begins on next page)



DOES HORMONAL PROFILE INFLUENCE BEHAVIORS IN PUBESCENT EWES?

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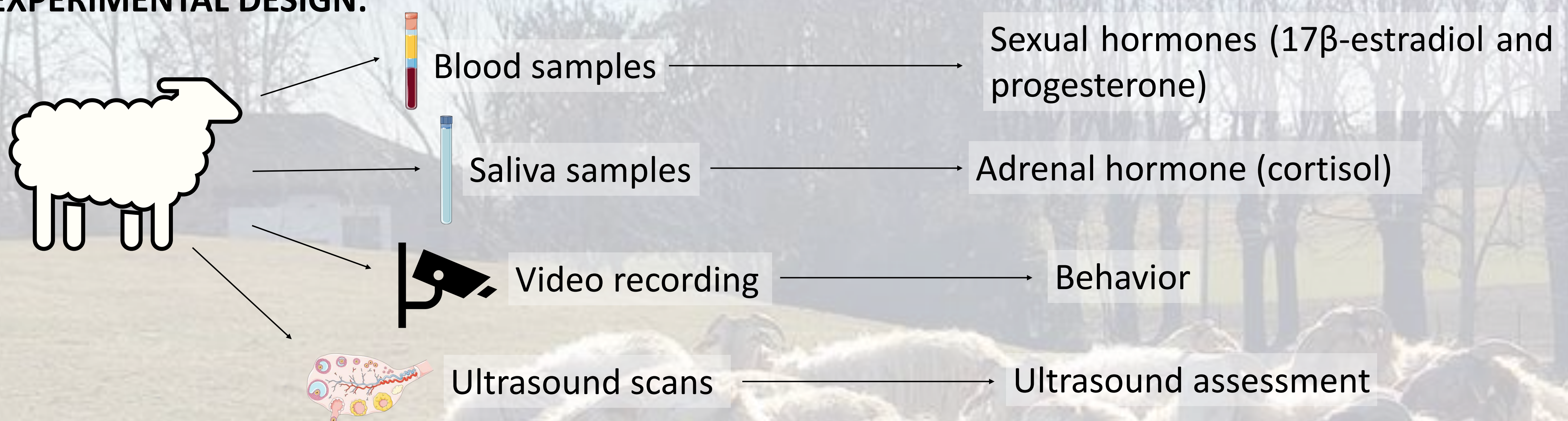
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INTRODUCTION: Given the importance of small ruminant farming systems for the rural economy and the conservation of the mountain ecology, SmartSheep project aims to contribute in knowledge to develop an efficient and sustainable supply chain in rustic breed.



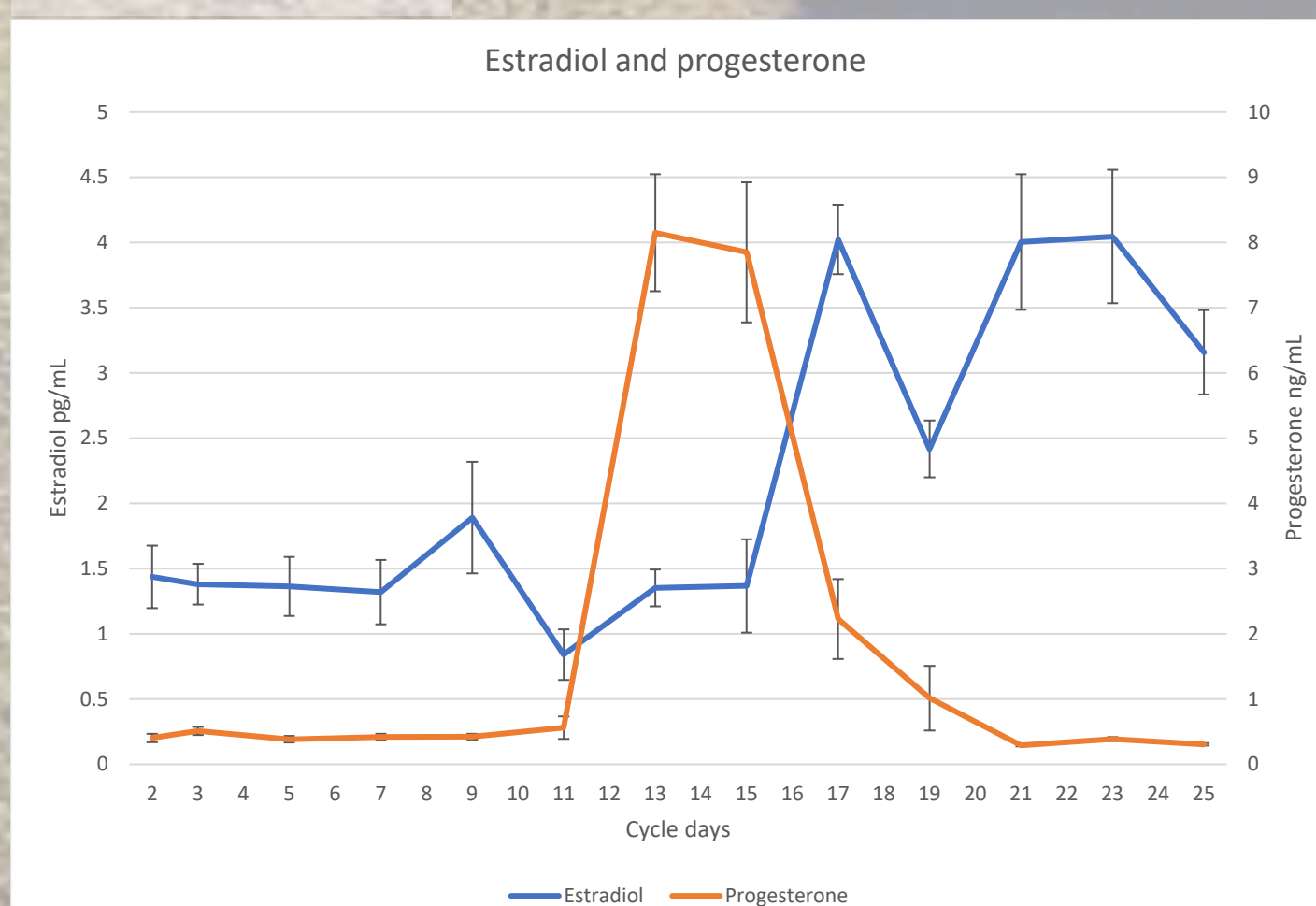
GOALS: Evaluation of behavior modification and adrenal response in relation to the stage of the first estrous cycle in Roaschina-Frabosana breed.

EXPERIMENTAL DESIGN:



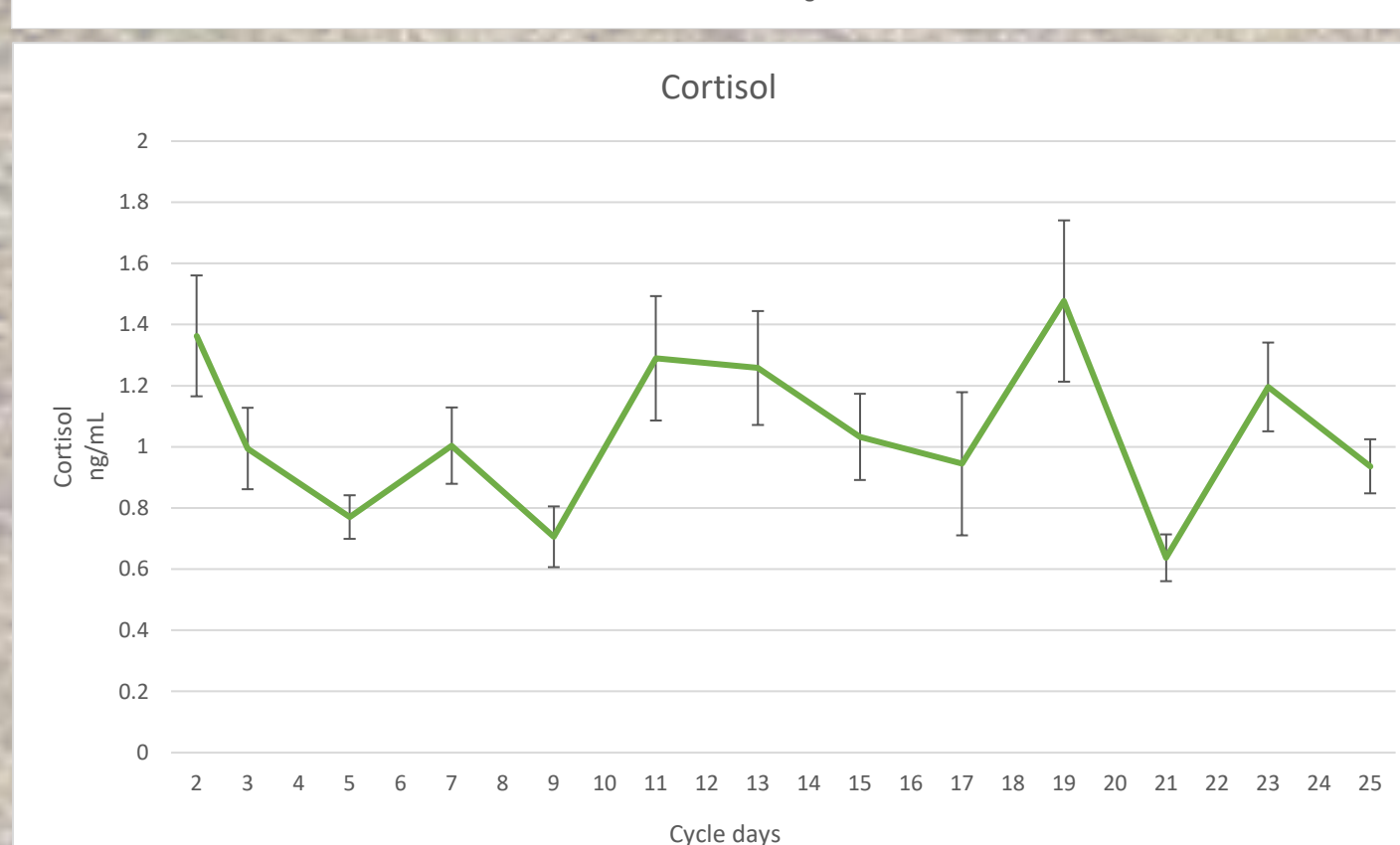
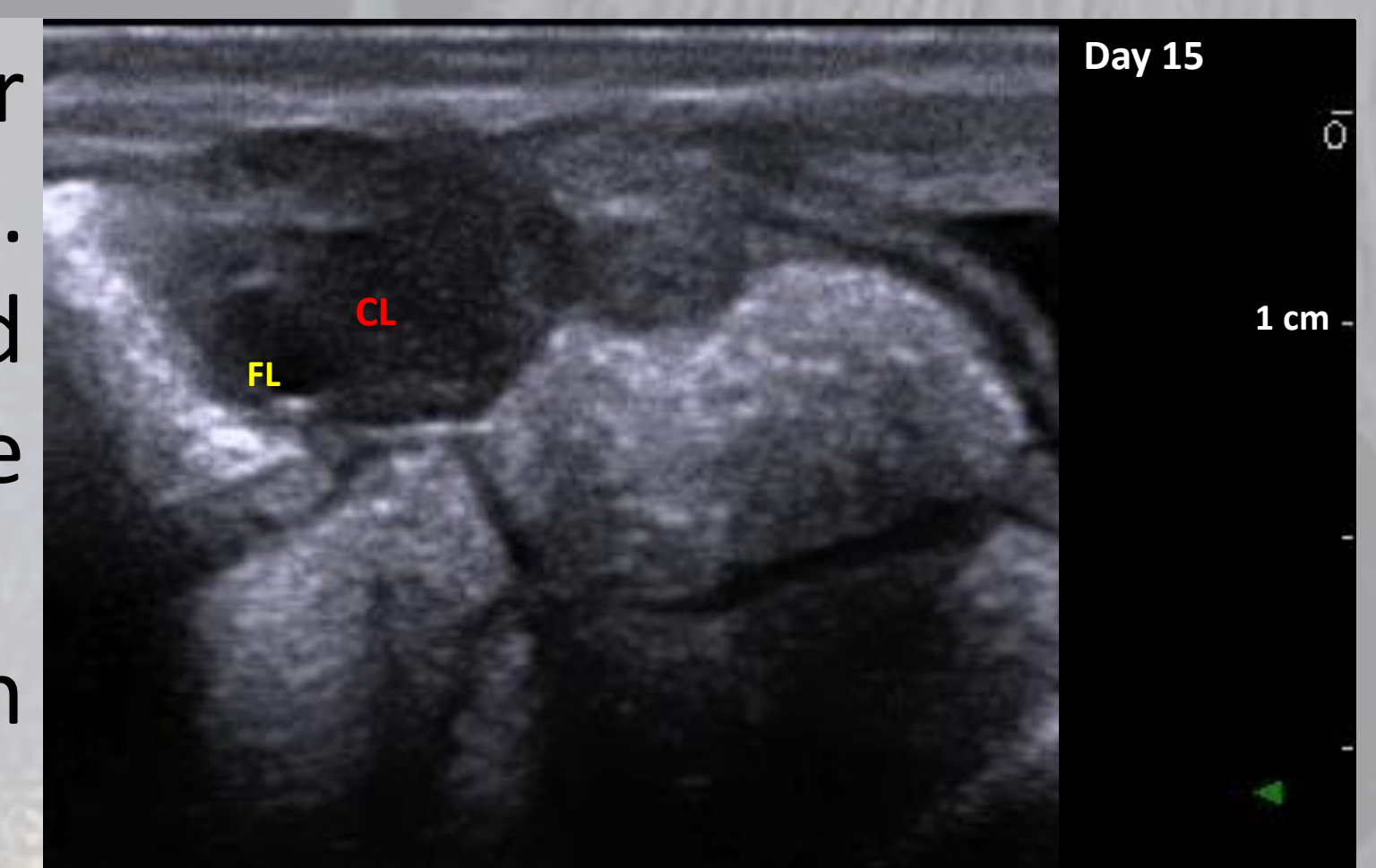
20 ewes of Frabosana-Roaschina breed (10-12 months old) were synchronized with a standardized protocol. Behavioral and hormonal data were analyzed in relation to the estrous cycle phases obtained from hormonal patterns. Video data, registered through scan sampling, were eventually related to an adaptive endocrine response.

RESULTS:

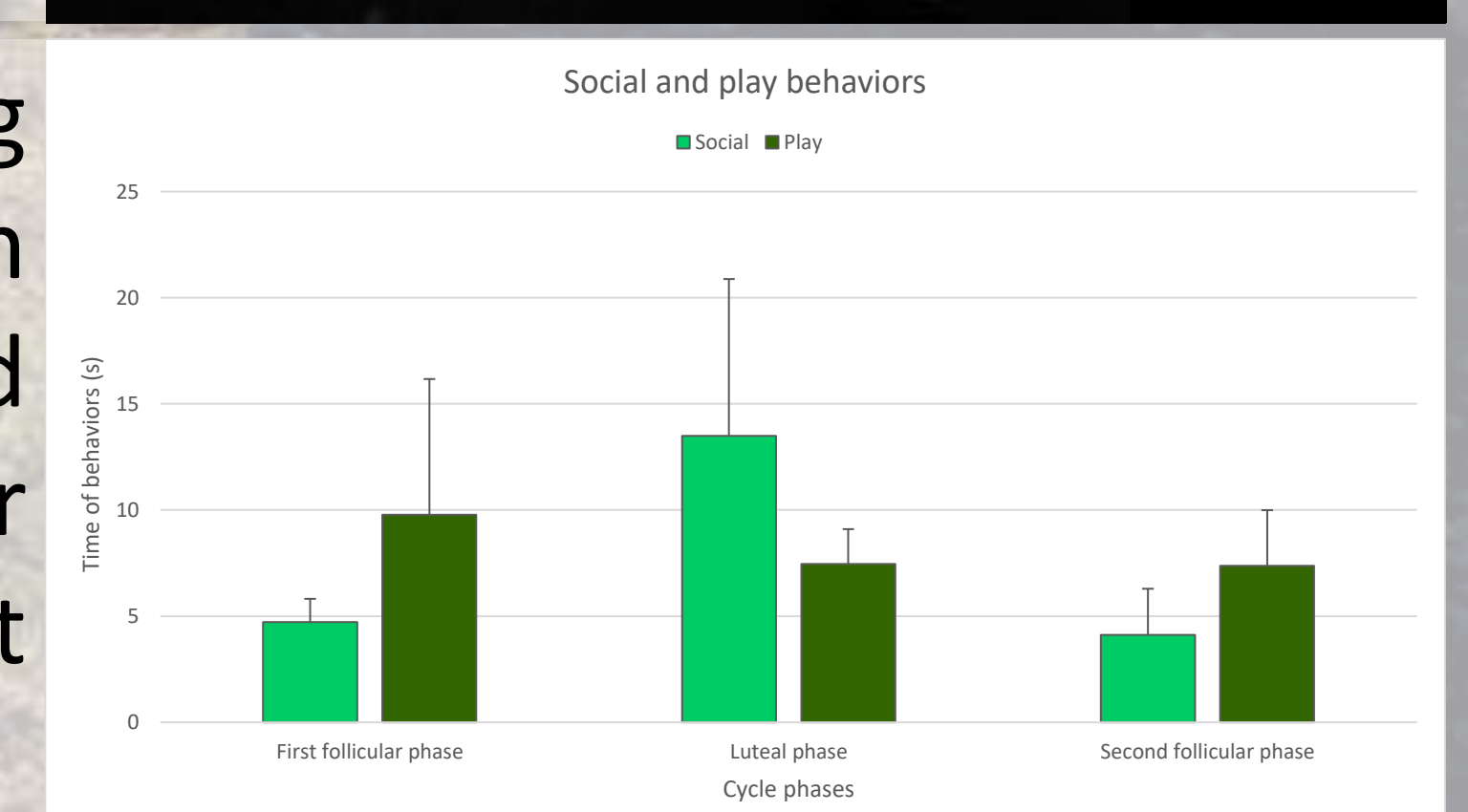


These hormonal levels confirmed proper cyclic activities in the ewes at first estrus. Three phases (first follicular, luteal and second follicular) for behavioral analysis have been identified.

No significant differences were detected in the cortisol levels during the phases of cycle.



The ewes didn't show sexual behaviors during the reproductive cycle. Social (displacing from resources, grooming, nudge, and sniffing) and play (frontal butt, reciprocal butt, side/rear butt, and mounting) behaviors weren't statistically different.



CONCLUSION: Although these animals reached the age of puberty, like other Italian dairy breeds, at 12 months old, they showed a silent ovulation. Play behaviors and breed-specific characteristics may be reflected in reproductive functionality. Frabosana-Roaschina is indeed an autochthonous and rustic breed in West North Alpine bioregion on which a milder selection has been performed. For this reason the reproductive performance of the breed may be taken into account before planning a reproductive strategy in order to reduce the failure rate of fertility.

This work is supported by CRC grant, Agriculture 2.0.