# The impact of a technology ban on student's perceptions and performance in Introduction to Psychology

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## Technology Use in The Classroom

The presence of laptops and other personal technology devices in the classroom has been associated with decreases in academic performance (Hembrooke & Gay, 2003; Muller & Oppenheimer, 2014; Sana et al., 2013).

The detrimental impacts of technology usage have lead instructors to limit (Aguilar-Roca et al., 2012) or fully ban technology use in the classroom (Green, 2016).

In the current study, we assess the impact of a technology ban on students reported engagement, interest, rapport with instructor, and performance across four sections of Introduction to Psychology taught by the same instructor.

## Measures and Sample

### Measures of perceptions

•Student course engagement questionnaire (Handelsman et al., 2005)

•Interest in psychology scale (Harackiewicz et al., 2000)

•Professor-student rapport scale (Wilson et al, 2010)

### Measure of performance

•Exam 1 Grade

### Measures of technology usage

•Note taking preference in typical class

•Frequency of cell phone checking in typical class

| Spring 2016 | Fall 2016 |
|---|---|
| **Technology-Ban** | **Technology-Permitted** |
| Introduction to Psychology | Introduction to Psychology |
| 10:10 a.m. – 11:30 a.m. | 10:10 a.m. – 11:30 a.m. |
| 16 Students | 16 Students |
| Mean Age = 18.94 | Mean Age = 18.38 |
| **Technology-Permitted** | **Technology-Ban** |
| Introduction to Psychology | Introduction to Psychology |
| 11:50 a.m. – 1:10 p.m. | 11:50 a.m. – 1:10 p.m. |
| 22 students | 19 students |
| Mean Age = 18.95 | Mean Age =18.47 |

## Research Questions

1. How does a technology ban impact students perceptions and performance in Introduction to Psychology?

2. Does the impact of a technology ban differ for students who are frequent technology users compared to students who are infrequent technology users?

## Results
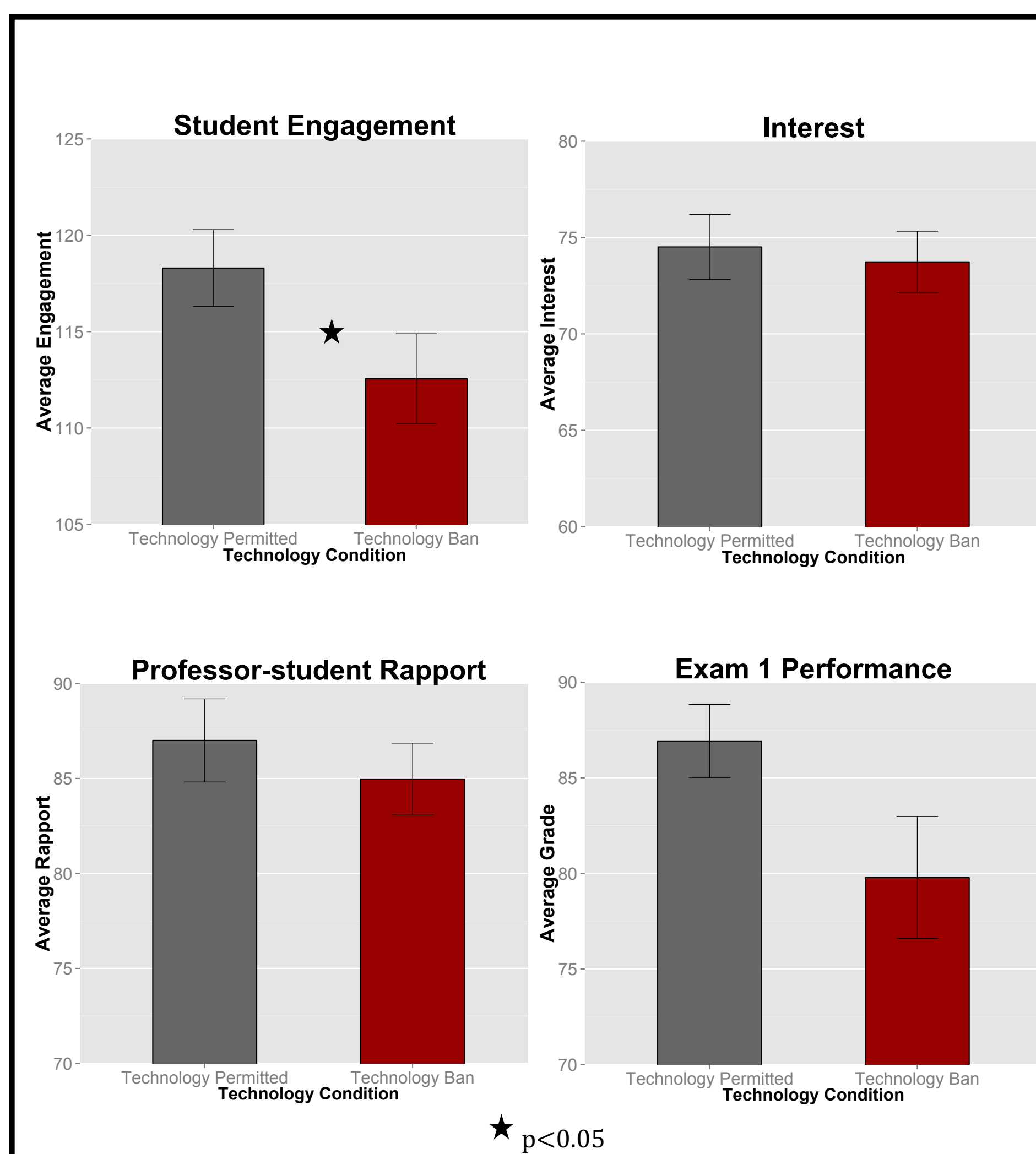


Statistically significant reduction in student engagement in technology-ban sections.

Numerical reduction in reported student interest, professor-student rapport, and exam performance in technology-ban sections.



**Note Taking Preference in Typical Class**

Technology Ban | Technology-Permitted

Paper = 31 | Paper = 29
Laptop = 4 | Laptop = 3

**Frequency of Phone Checking in Typical Class**

Technology-Ban | Technology-Permitted

2.2 times/class | 2.3 times/class

For more information, please contact Tom Hutcheon (thutcheo@bard.edu).

## Results

Median split based on reported frequency of cell phone checking during a typical class.
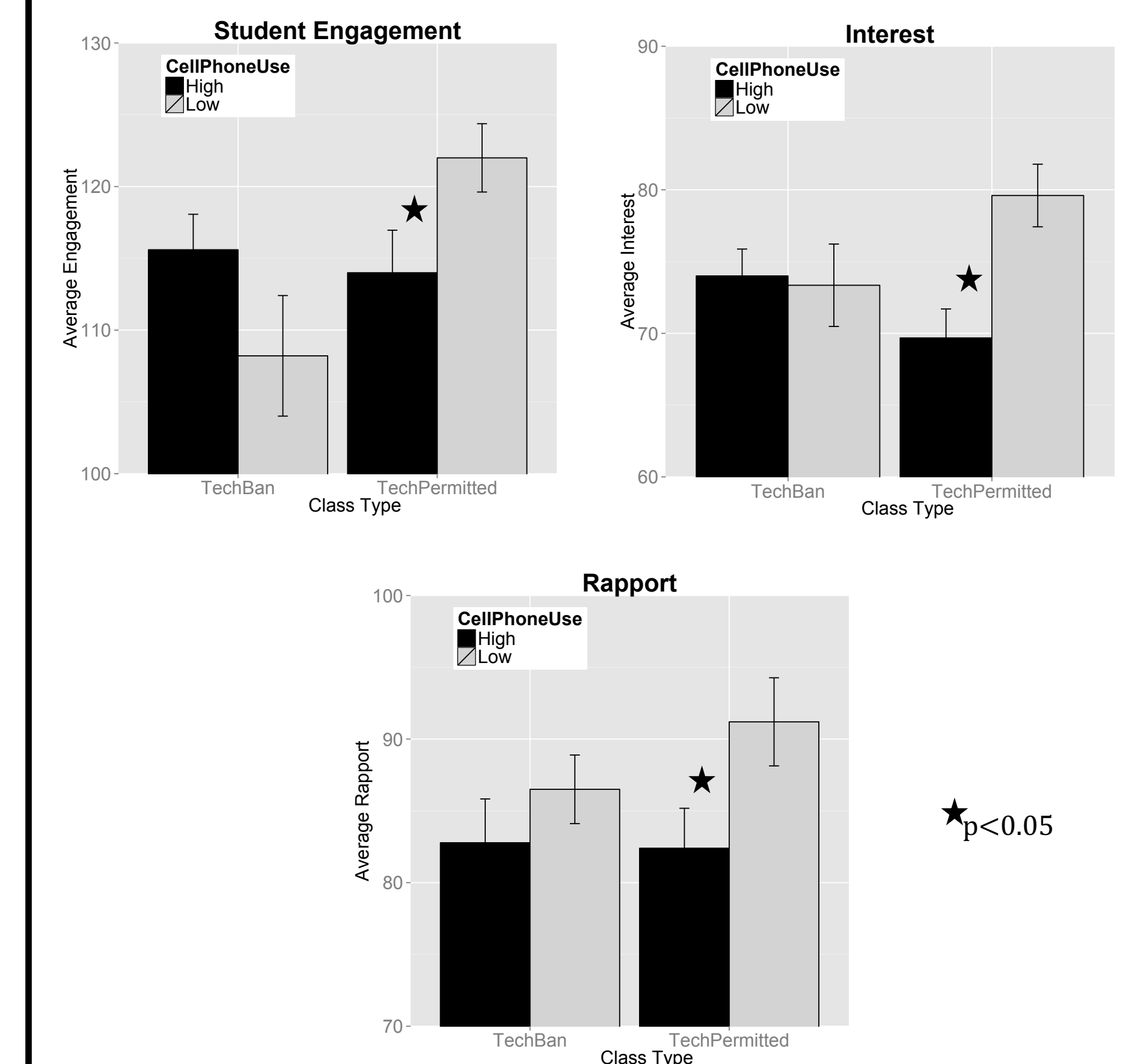


Low frequency users of technology reported significantly higher engagement, interest, and rapport compared to high frequency users in technology permitted sections. No differences between users was observed in technology ban sections.

## Conclusions

The implementation of a technology ban was generally associated with lower ratings of course perceptions and performance.

In addition, frequency of cell phone use in a typical class impacted student's perceptions in the classroom.

Taken together, our results suggest using caution in implementing a technology ban.

## References

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