

# Priming and permutation tests

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## 1

```
> neg.data.full = cleanNegData("coding.cod.ooo")
> neg.data.full = tbl_df(neg.data.full)
> # Filter out tokens without do-support label, year, or type
> excluded.texts = c("CMBOETH", "CMORM", "CMNTEST", "CMOTEST")
> # CMBOETH : translation of Boethius' "Consolation of Philosophy", which is notably stilted
> # CMORM : Ormulum is very specific poetic format
> # CMOTEST, CMNTEST : Old and new testaments
> # Exclude tokens where 'ne' is contracted, appears in negative concord, or looks like preposition
> neg.data.full = neg.data.full %>% filter(! author %in% excluded.texts & exclude != "X")

> # Plot individual documents
> neg.plot.auth = neg.data.full %>% group_by(year) %>% summarize(total=n(), ne=sum(neg.type=="ne"))
> neg.plot.auth = melt(neg.plot.auth, id=c("year", "total"))

> # Plot points and smooth fits
> ggplot(aes(x = year, y = value, color = variable), data = neg.plot.auth) +
+   geom_point(aes(size = total), alpha = 0.5, position = position_jitter()) +
+   geom_smooth(aes(weight = total), method="loess", span=.5, se = FALSE, size=4) + # span=.5
+   xlab("Year") + ylab("Proportion forms") + scale_size_area("N", max_size = 20) +
+   theme(text = element_text(size=30)) + theme(legend.position="none") +
+   coord_cartesian(xlim = c(1090,1540)) + coord_cartesian(ylim = c(-.1,1.1))
> ggsave('neg-plot-auth.pdf', width=8, height=4)
```

## 2

