possible\_figures

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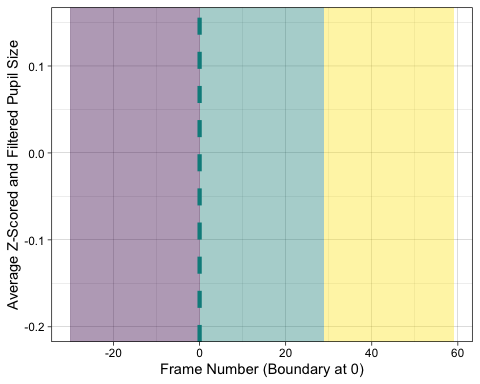
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# Figure Option 1

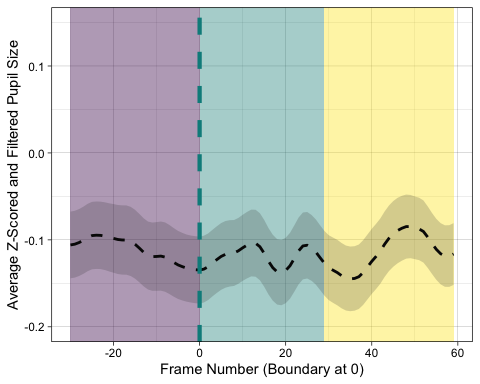
plot.data <- pdr\_data %>%   
 group\_by(region\_1s, partner, reg\_num) %>%   
 summarise(mean = mean(pdr\_z\_filtered, na.rm = TRUE),  
 sd = sd(pdr\_z\_filtered, na.rm=TRUE),  
 n = n(),  
 se=sd/sqrt(n),  
 ci = qt(0.975,df=n-1)\*se)

## `summarise()` regrouping output by 'region\_1s', 'partner' (override with `.groups` argument)

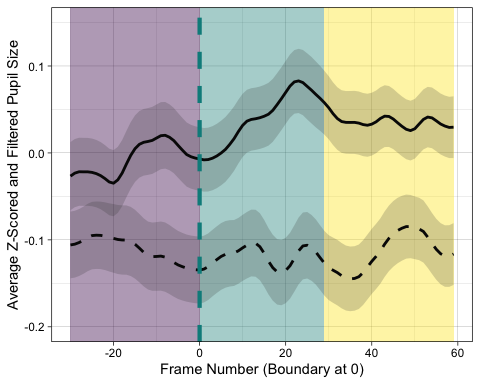
rects <- data.frame(xstart = c(-30, 0, 29), xend = c(0, 29, 59), Region = c("pre-boundary", "boundary", "post-boundary"))  
  
rects <- rects %>%   
 mutate(Region = factor(Region, levels = c("pre-boundary", "boundary", "post-boundary")))  
  
plot.data$partner <- factor(plot.data$partner, levels = c("Infant", "Adult"), labels = c("Motionese", "Adult-Directed"))  
  
#without any lines  
ggplot(plot.data, aes(x = reg\_num, y = mean, linetype = partner)) +  
 geom\_rect(data = rects, aes(xmin = xstart, xmax = xend, ymin = -Inf, ymax = Inf, fill = Region), alpha = 0.4, inherit.aes = FALSE) +  
 ylim(-0.2, 0.15) +  
 theme\_linedraw() +  
 scale\_fill\_viridis(discrete = TRUE, option = "D") +  
 geom\_vline(xintercept = 0, color = "darkcyan", linetype = "dashed", size = 1.5) +  
 theme(plot.title = element\_text(hjust = 0.5), legend.position = "none") +  
 labs(y = "Average Z-Scored and Filtered Pupil Size", x = "Frame Number (Boundary at 0)", linetype = "Demonstration Type")



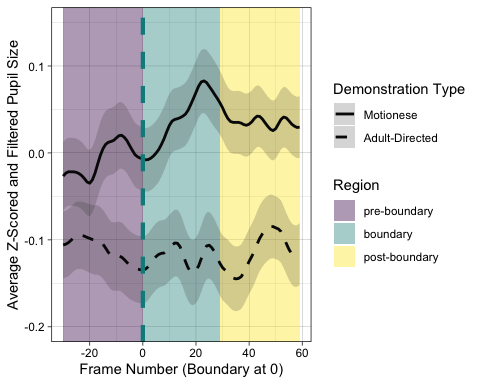
#only adult-directed  
ggplot(filter(plot.data, partner == "Adult-Directed"), aes(x = reg\_num, y = mean)) +  
 geom\_rect(data = rects, aes(xmin = xstart, xmax = xend, ymin = -Inf, ymax = Inf, fill = Region), alpha = 0.4, inherit.aes = FALSE) +  
 geom\_line(size = 1, linetype = "dashed") +  
 geom\_ribbon(aes(ymin=mean-se, ymax=mean+se), alpha=0.2) +  
 ylim(-0.2, 0.15) +  
 theme\_linedraw() +  
 scale\_fill\_viridis(discrete = TRUE, option = "D") +  
 geom\_vline(xintercept = 0, color = "darkcyan", linetype = "dashed", size = 1.5) +  
 theme(plot.title = element\_text(hjust = 0.5), legend.position = "none") +  
 labs(y = "Average Z-Scored and Filtered Pupil Size", x = "Frame Number (Boundary at 0)", linetype = "Demonstration Type")



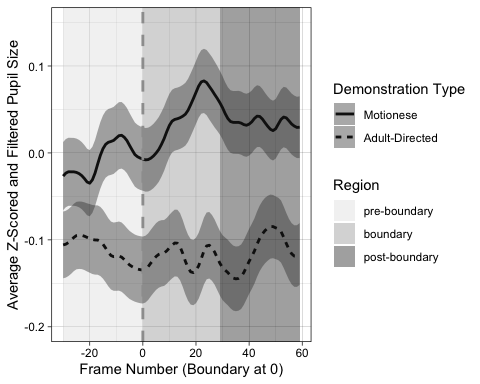
#motionse and adult-directed  
ggplot(plot.data, aes(x = reg\_num, y = mean, linetype = partner)) +  
 geom\_rect(data = rects, aes(xmin = xstart, xmax = xend, ymin = -Inf, ymax = Inf, fill = Region), alpha = 0.4, inherit.aes = FALSE) +  
 geom\_line(size = 1) +  
 geom\_ribbon(aes(ymin=mean-se, ymax=mean+se), alpha=0.2) +  
 ylim(-0.2, 0.15) +  
 theme\_linedraw() +  
 scale\_fill\_viridis(discrete = TRUE, option = "D") +  
 geom\_vline(xintercept = 0, color = "darkcyan", linetype = "dashed", size = 1.5) +  
 scale\_linetype\_manual(values=c("solid", "dashed")) +  
 theme(plot.title = element\_text(hjust = 0.5), legend.position = "none") +  
 labs(y = "Average Z-Scored and Filtered Pupil Size", x = "Frame Number (Boundary at 0)", linetype = "Demonstration Type")



#with legend  
ggplot(plot.data, aes(x = reg\_num, y = mean, linetype = partner)) +  
 geom\_rect(data = rects, aes(xmin = xstart, xmax = xend, ymin = -Inf, ymax = Inf, fill = Region), alpha = 0.4, inherit.aes = FALSE) +  
 geom\_line(size = 1) +  
 geom\_ribbon(aes(ymin=mean-se, ymax=mean+se), alpha=0.2) +  
 ylim(-0.2, 0.15) +  
 theme\_linedraw() +  
 scale\_fill\_viridis(discrete = TRUE, option = "D") +  
 geom\_vline(xintercept = 0, color = "darkcyan", linetype = "dashed", size = 1.5) +  
 scale\_linetype\_manual(values=c("solid", "dashed")) +  
 theme(plot.title = element\_text(hjust = 0.5)) +  
 labs(y = "Average Z-Scored and Filtered Pupil Size", x = "Frame Number (Boundary at 0)", linetype = "Demonstration Type")

 # Figure Option 2

ggplot(plot.data, aes(x = reg\_num, y = mean, linetype = partner)) +  
 geom\_rect(data = rects, aes(xmin = xstart, xmax = xend, ymin = -Inf, ymax = Inf, fill = Region), alpha = 0.4, inherit.aes = FALSE) +  
 geom\_line(size = 1) +  
 geom\_ribbon(aes(ymin=mean-se, ymax=mean+se), alpha=0.4) +  
 ylim(-0.2, 0.15) +  
 theme\_linedraw() +  
 scale\_fill\_manual(values = c("grey88", "grey62", "grey8")) +  
 geom\_vline(xintercept = 0, color = "grey62", linetype = "dashed", size = 1) +  
 theme(plot.title = element\_text(hjust = 0.5)) +  
 labs(y = "Average Z-Scored and Filtered Pupil Size", x = "Frame Number (Boundary at 0)", linetype = "Demonstration Type")

 #Figure Option 3

ggplot(plot.data) +  
 geom\_rect(data = rects, aes(xmin = xstart, xmax = xend, ymin = -Inf, ymax = Inf, fill = Region), alpha = 0.4, inherit.aes = FALSE) + scale\_fill\_manual(values = c("grey88", "grey62", "grey8")) +  
 new\_scale\_fill() +  
 geom\_line(aes(x = reg\_num, y = mean, linetype = partner, colour = partner), size = 1) +  
 geom\_ribbon(aes(x = reg\_num, ymin=mean-se, ymax=mean+se), alpha=0.4) +  
 scale\_fill\_viridis(discrete = TRUE, option = "D") +  
 ylim(-0.2, 0.15) +  
 theme\_linedraw() +  
 geom\_vline(xintercept = 0, color = "darkcyan", linetype = "dashed", size = 1) +  
 theme(plot.title = element\_text(hjust = 0.5)) +  
 labs(y = "Average Z-Scored and Filtered Pupil Size", x = "Frame Number (Boundary at 0)", linetype = "Demonstration Type")

