Transport experiment

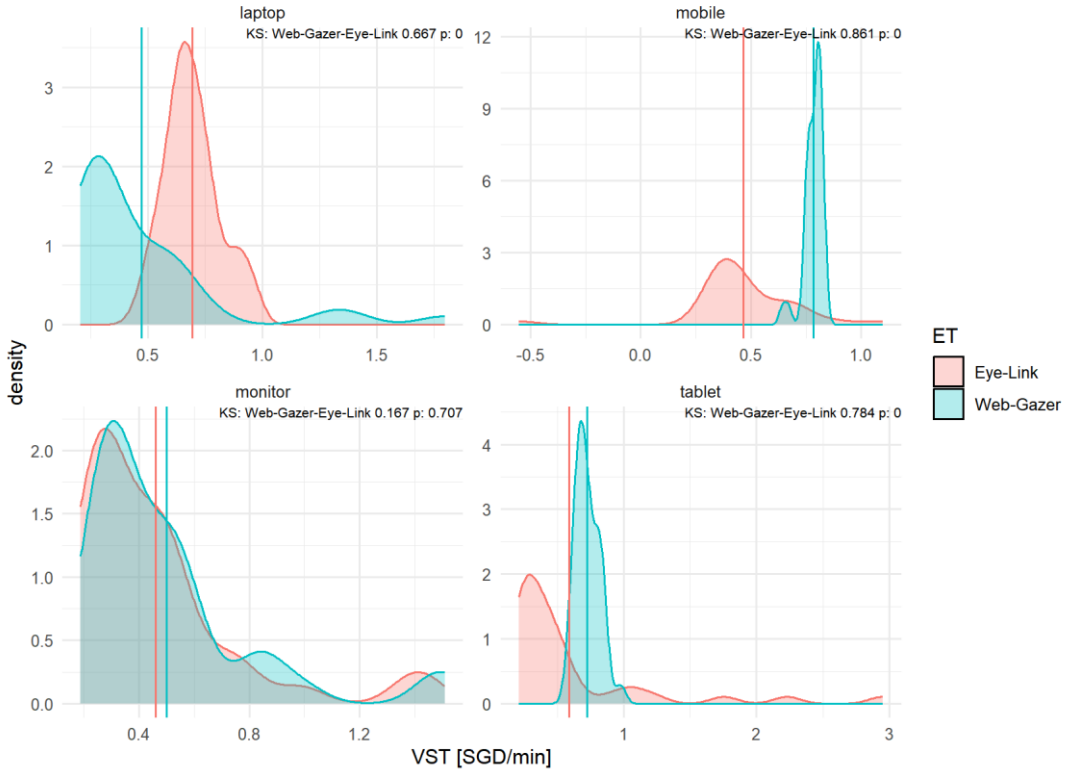

Figure 1. Comparison of Subjective Value of Travel Time Savings (SVTTS, SGD/min) distribution, across devices and eye-tracking. Annotation shows Kolmogorov-Smirnov test between distributions. Distributions are consistent only in the monitor case.

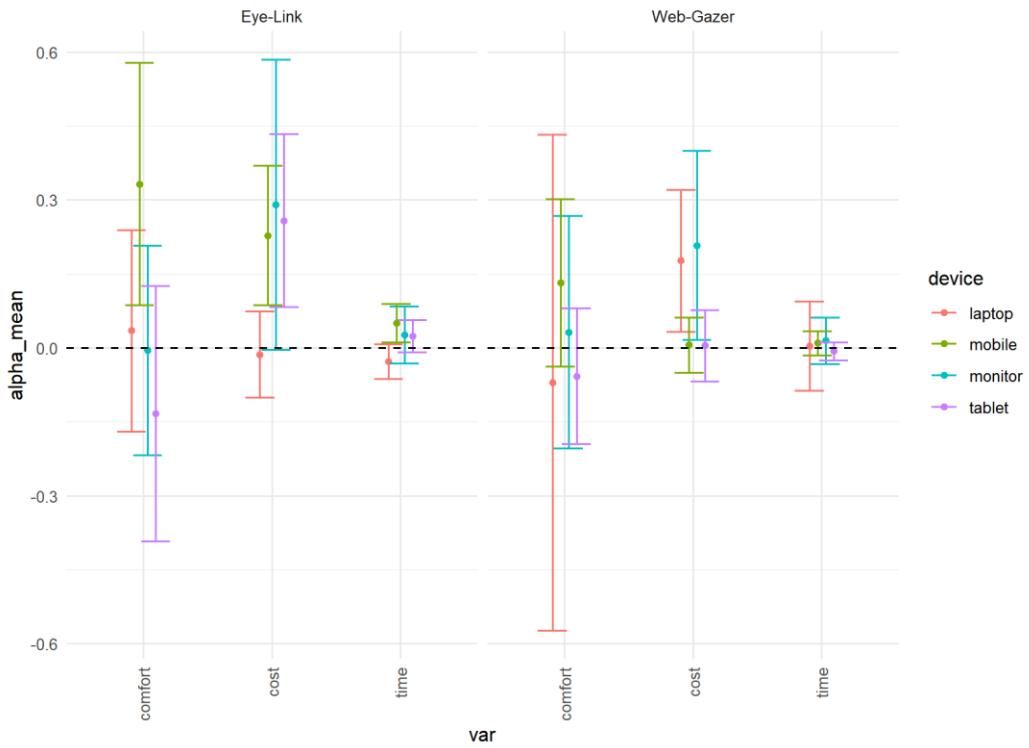

Figure 2. α_k Confidence interval. α_k is the influence of the information processing on the marginal utility β_k. If $\alpha_k = 0 \; \forall \; k,$ then the information processing captured with eye-tracking is not relevant in the model. The plot shows that, for Eye-link and Web-Gazer there is at least one k such that $\alpha_k \neq 0$.

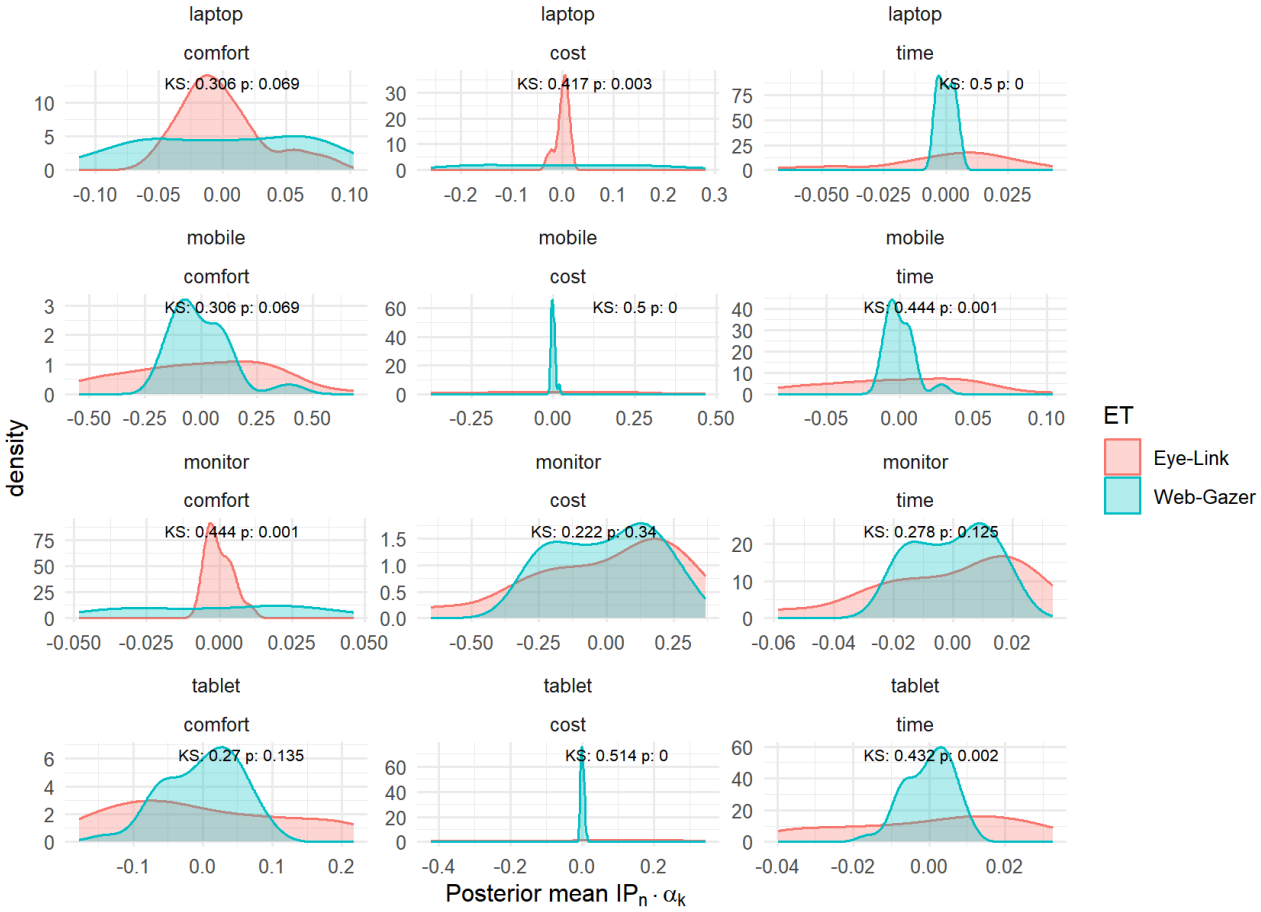

Figure 3. Distribution of the latent information processing (IP_n) scaled by α_k. If both eye-trackers are consistent, then this distribution should be the same. The monitor case shows the most consistent distributions. Annotations show Kolmogorov-Smirnov test between distributions.

Pizza experiment

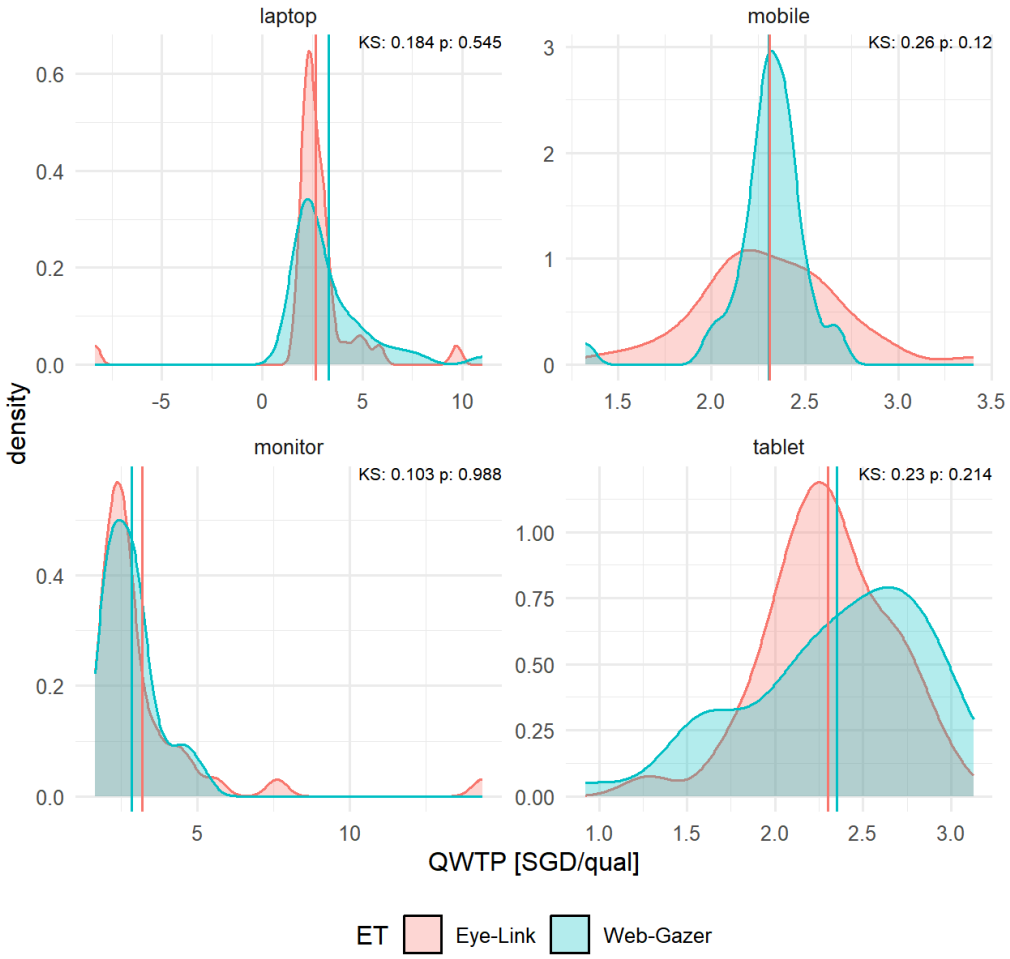

Figure 4 Comparison of Quality Willingness to Pay (QWTP, SGD/qual) distribution, across devices and eye-tracking. Annotation shows Kolmogorov-Smirnov test between distributions. Distributions are consistent.

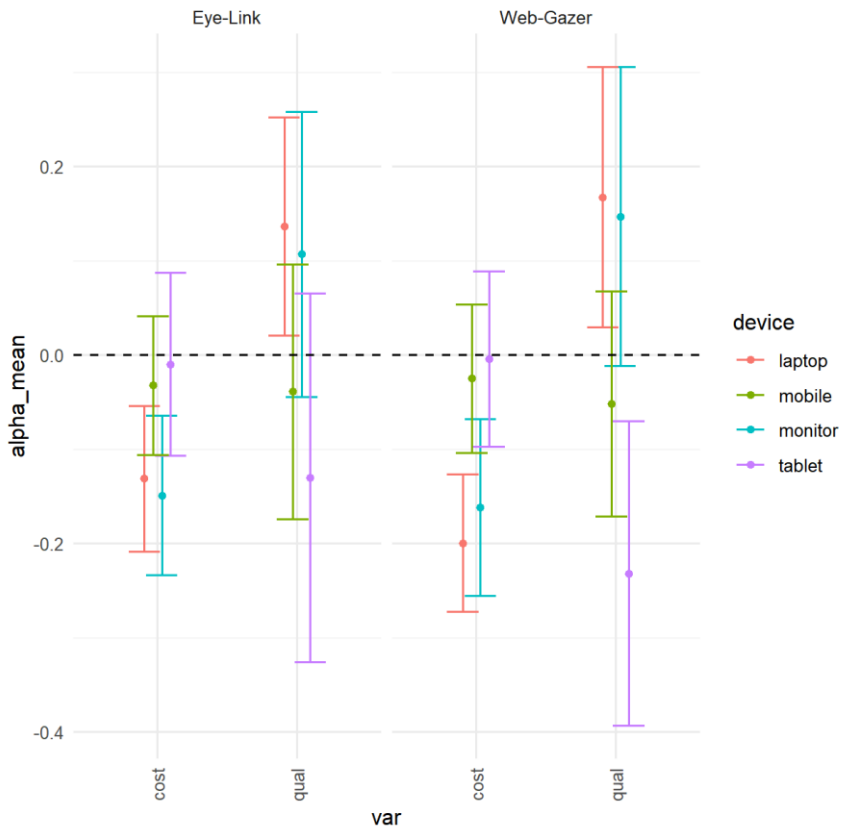

Figure 5 α_k Confidence interval. α_k is the influence of the information processing on the marginal utility β_k. If $\alpha_k = 0 \; \forall \; k,$ then the information processing captured with eye-tracking is not relevant in the model. The plot shows that, for Eye-link and Web-Gazer there is at least one k such that $\alpha_k \neq 0$.

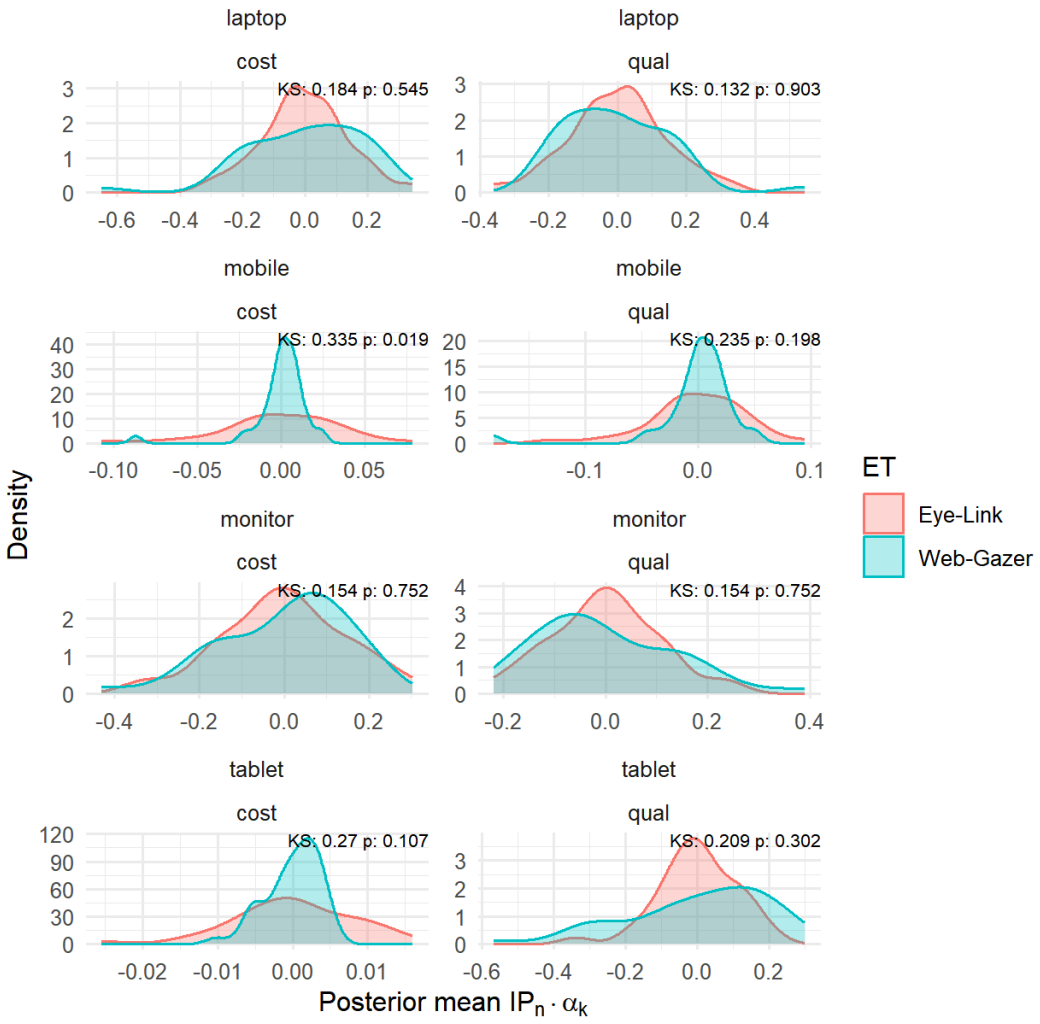

Figure 6 Distribution of the latent information processing (IP_n) scaled by α_k. If both eye-trackers are consistent, then this distribution should be the same. Annotations show Kolmogorov-Smirnov test between distributions. All cases are consistent except mobile.

Comparison

Hypothesis	Device	Experiment 1		Experiment 2	
		Eye-Link	Web-Gazer	Eye-Link	Web-Gazer
H1: Eye-tracking data is relevant in the model	Monitor	Yes	Yes	Yes	Yes
	Laptop	Yes	Yes	Yes	Yes
	Tablet	Yes	No	Yes	Yes
	Mobile	Yes	No	Yes	Yes
H2: Latent IP distribution are consistent across eye-trackers	Monitor	Yes (2/3)		Yes (2/2)	
	Laptop	No (0)		Yes (2/2)	
	Tablet	No (1/3)		Yes (2/2)	
	Mobile	No (0)		No (1/2)	
H3: The distribution of WTP for relevant attributes are consistent across eye-trackers	Monitor	Yes		Yes	
	Laptop	No		Yes	
	Tablet	No		Yes	
	Mobile	No		No	

H1: t-test of α_k. H1 is validated if exists a k such that $\alpha_k \neq 0$.

H2: Kolmogorov-Smirnov (KS) test of $\alpha_k IP_n$ posterior distribution. H2 is validated if the distribution $\alpha_k IP_n$ obtained with Eye-Link data is not significantly different to the one obtained with Web Gazer data, according to the KS test.

H3: Kolmogorov-Smirnov (KS) test of distributions of Subjective Value of Travel Time Savings (SVTTS) in the case of experiment 1, and WTP for pizza quality in the second experiment. Eye-Link and Web-Gazer distributions should be the same.

Preliminary conclusions:

Web-Gazer accuracy is sensitive to stimulus size and screen size. It is more accurate with small DCE and larger screen size.