keep	Index	ID	Statement	Splitted propositions	Key_expressions	Subject	Subject_quality	Verb	Verb_quality	Object	Object_quality	Complement
			Viewing this chart, I understand the overall	Viousing this short Lunderstand								
<b>\</b>		0 172237867	message that the visualization designer is trying to convey.	the overall message	understand; overall message;	viewer		understand		message	overall	viewing chart
~			Viewing this chart, I understand the overall message that the visualization designer is trying to									
		0 172237867	,	convey.	overall message; convey;	designer		convey	trying to	message	overall	
~			Viewing this chart, I am confident that I am aware of general trends.		confident; aware; general trends;	viewer	aware; confident	be		general trends		
$\checkmark$		2 172237867	Viewing this chart, I am confident that I am aware of the existence of outliers.		confident; aware; outliers;	viewer	aware: confident	be		outliers		
~			The visualization shows the data clearly		clearly show	visualization		show		data		
~		4 199677506	I have no clue what the picture is about, but it looks awesome	I have no clue what the picture is about	have no clue;	viewer		have a clue	not	picture	about	
~			I have no clue what the picture is about, but it looks									
		4 199677506	awesome	it looks awesome	look awesome	picture	awesome	look (state)				
$\checkmark$		5 199677506	I see a clear and unexpected pattern in the data		see; clear pattern; unexpected; pattern;	viewer		see		pattern	clear; unexpected	in data
$\checkmark$		6 199677506	This visualization is maybe useful for experts in [visualization/the domain], for lay persons it is far too complex	This visualization is maybe useful for experts in [visualization/the domain]	useful; experts	visualization	useful	be	maybe	experts		for experts in domain
$\checkmark$		6 199677506	This visualization is maybe useful for experts in [visualization/the domain], for lay persons it is far too complex	for lay persons it is far too complex	lay person; complex	visualization	complex	be	far too	lay person		for lay persons
~				Without annotation, this picture is useless	useless	picture	useless	be		,, p		without annotation
$\checkmark$				I do not know where to look and what to see	know where to look; know what to see	viewer		know	not	where; what	look, see	without annotation
~			It took me [1 second / 1 minute / 1 hour] to understand the visualization	IIIIai to coo	timespan; understand	viewer		understand	took [timespan]	visualization	ioon, ooo	William alliano
<b>~</b>			This visualization is easy for me to process for the intended task(s) or activitie(s).		easy to process	viewer		process	easy	visualization		for intended task; for intended activity
			For task(s) or activitie(s) that I intend to use this		easy to process	viewei		process	easy	Visualization		from visualization; use
$\checkmark$	1		visualization for, I can easily read relevant information from this visualization.		easily read; relevant information	viewer	able	read	easily	information	relevant	for intended task; use for intended activity
$\checkmark$			I can easily read the information I need from this visualization.		easily read; needed information	viewer	able	read	easily	information	needed	from visualization
~			This visualization is readable.		readable;	visualization	readable	be				
~	1	13 98478158	Think of books. Some books are easy to read, others are difficult. Transfer that scale to this visualization. I think that this visualization is readable.		readable; easy to read; difficult	visualization	readable; easy to read; difficult to read	be				like a book is easy or difficult to read
~	1	98478158	I can easily see and process information from this visualization.		easily see; easily process; information	viewer		see; process	easily	information		from visualization
~	1	15 162043162	Text and labels are appropriately sized and readable.		text; labels; sized; readable	text; labels	appropriately sized; readable	be				
~			The scale of the visualization on the screen is appropriately sized.		scale; sized;	scale of visualization	appropriately sized;	be				on the screen
$\checkmark$		7 162043162	There is no blurring or image quality issue with the		blurring; image quality	visualization	blurring; image quality issue	have (be)				
~			I can interpret the meaning of the chart easily.		interpret; meaning	viewer	able	interpret	easily	meaning	of the chart	
			I think others could interpret the meaning of the							J		
		19 162043162	•		others; interpret; meaning	others		interpret	easily	meaning		I think
~	2		I find the visualization to be visually overwhelming.  I can clearly identify features of the data that are		visually overwhelming clearly identify; data features;	visualization	visually overwhelming	be				I find
<b>~</b>	2		relevant to my analysis tasks.		relevant	viewer	able	identify	clearly	data features	relevant	to analysis task
~	2		I am not distracted by representations of data that are not relevant to my analysis tasks.		distracted; relevant representations	viewer		distracted	not	data representations	not relevant	to analysis task
$\checkmark$	2		I can clearly identify patterns and trends that are relevant to my analysis tasks.		clearly identify; pattern; trend; relevant	viewer	able	identify	clearly	trend; pattern	relevant	to analysis task
~	2	24 179150639	My eyes are drawn to interesting and/or meaningful features of the data		eyes; drawn to; interesting; meaningful; data features	viewer's eyes	drawn to	be		data features	interesting; meaningful	

еер	Index	ID	Statement	Splitted propositions	Key_expressions	Subject	Subject_quality	Verb	Verb_quality	Object	Object_quality	Complement
<b>~</b>	25	5 179150639	I am not irritated by the design choices that were made during the creation of this data visualization.		irritated; design choices	viewer	irritated	be	not	design choices	made during creation	
~	26	3 179150639	I am able to make sense of the meaning of the data visualization without having to look at it for more than a few seconds.	I am able to make sense of the meaning of the data visualization	make sense; meaning;	viewer	able	make sense	not having to look for more than few seconds	data visualization	meaning	
<b>~</b>	26	6 179150639	I am able to make sense of the meaning of the data visualization without having to look at it for more than a few seconds.	without having to look at it for more than a few seconds	few seconds; look;	viewer		look	not more than few seconds	visualization		(meaning)
<b>~</b>	27	7 179150639	Looking at this data visualization does not make me swear out loud.		annoyed;	viewer	annoyed	look		data visualization		
~	28	3 179150639	The data visualization doesn't make me more confused than if I have had never looked at it in the first place.		confused;	visualization		makes	not	viewer	more confused	than if I had never looked at it in the first place
<b>~</b>	29	9 144422486	It is easy to grasp the information that the sisualization is intended to convey?		easy grasp; information; convey	viewer		grasp	easy	information	intended to convey	in the visualization
<b>~</b>	30	144422486	It is easy to generate a verbal/textual description/story out of the visualization		story; verbal description	viewer		generate	easy	description; story	verbal; textual	from the visualization
<b>~</b>	3′	1 144422486	It is easy to grasp the context (units, axes, labels, 6 geo-spatial info) from the visualization		easy grasp; context;	viewer		grasp	easy	context; units; axes; labels; spatial information		in the visualization
~	33	2 144422486	It is easy to interpret/deciper the visual encodings		interpret; decipher	viewer		interpret; decipher	easily	visual encodings;		
~			It is easy to see patterns		patterns;	viewer		see	easy	patterns		
			It is easy to see trends, clusters, outliers		trends: clusters: outliers	viewer		see	easy	trends; clusters; outliers		
~			I can quickly understand what the visualization is trying to convey.		quickly understand;	viewer	able	understand	quickly	what	visualization trying to convey	
$\checkmark$			The visual appearance of the visualization is attracting my attention and I want to explore the data in greater detail.		attracting; attention;	visual appearance	able	attracting	quickly	attention	convey	
~	36	795509158	The visual appearance of the visualization is attracting my attention and I want to explore the data in greater detail.		want; explore; details	viewer		want	to explore	data details		
<b>~</b>	37	7 795509158	The visualization shows exactly the amount of information that is required.		shows exactly; required amount; information	visualization		shows	exactly	amount of information	required	
<b>~</b>	38	3 179530094	The chart was easy to read.		easy to read;	chart	easy to read	be				
<b>~</b>	39	9 179530094	I was able to extract the data points/values I was interested in.		extract; data points; values; interested	viewer	able	extract		data points; values	interested in	
<b>~</b>	40	179530094	It took a long time for me to understand what the chart was saying.		long time; understand; says	viewer		understand	took long time	what	chart says	
<b>~</b>	41	1 179530094	The chart was difficult to read.		difficult to read;	chart	difficult to read	be				
<b>~</b>	42	2 179530094	I couldn't find the information I needed to read or understand the chart.		find; needed information	viewer	able	find	not	information	needed	to understand the chart
<b>~</b>	42	2 179530094	I couldn't find the information I needed to read or understand the chart.		needed information	information	needed	be		to understand; to read		
<b>/</b>	43	3 179530094	It did not take me a long time to read the chart.		long time; read;	viewer		read	not take long time	chart		
<b>~</b>	44	4 928154673	I could make sense of the information in the graphic		make sense; information	viewer		make sense		information		in the graphic
<b>/</b>	45	928154673	The graphic was informative		informative	visualization	informative	be				
<b>~</b>	46	928154673	I could see structure in the graphic		see; structure	viewer		see		structure		in the graphic
<b>~</b>	47	7 199853047	This visualization is easy to understand.		easy; understand	visualization	easy to understand	be				
<b>/</b>	48	199853047	7 This visualization is challenging to understand.		challenging; understand	visualization	challenging to understand	be				
<b>~</b>	49	199853047	I can make sense of everything in this visualization.		make sense; everything	viewer	able	make sense		everything		in the visualization
<b>~</b>	50	199853047	There are parts of this visualization that are confusing.		parts; confusing	parts of visualization	confusing	be				
<b>~</b>	51	1 199853047	I could rapidly make sense of this visualization.		make sense; rapidly	viewer		make sense	rapidly			
~	52	2 199853047	It took me some time to make sense of this visualization.		time; make sense	viewer		make sense	took time	of the visualization		

keep	Index ID	Statement	Splitted propositions	Key_expressions	Subject	Subject_quality	Verb	Verb_quality	Object	Object_quality	Complement
$\checkmark$	E2 66740909	9 I find and understand the legend easily.		easily find; understand easily; legend	viewer		find; understand	easily	legend		I find
<b>✓</b>		I feel confident in identifying outliers, i.e. entities with abnormal properties.		confident; identify; outliers; entities properties; abnormal properties	viewer	confident feeling	identify	easily	outliers; entities with abnormal properties		i iina
~		I feel confident in identifying one or more groups of entities with similar properties.		confident; identify; groups; entities properties; similar properties	viewer	confident feeling	identify		groups; entities with similar properties		
<b>~</b>		I feel confident in understanding relations between properties based on the shown entities.		confident; understand; properties relationships;	viewer	confident feeling	understand		relationships between properties		based on shown entities
<b>~</b>	57 17884359	The visual encodings are clearly showing the data.		visual encodings; show clearly; data	visual		show	clearly	data		
~		33 The plot is easy to understand.		easy; understand; plot	plot	easy to understand	be	ordarry	uuu		
~		3 I can interpret the information in the plot.		interpret; information;	viewer	able	interpret		information		in the plot
~		3 The plot is easy to read.		easy; read	plot	easy to read	be				
~		3 The plot is cluttered.		cluttered	plot	cluttered	be				
		I have a hard time understanding what I am seeing			1						
$\checkmark$	62 17884359			hard time; understand; what I see	viewer		understand	hard time	what	I see	
~	63 17884359	The main message the plot wants to make is clear to me.	The main message the plot wants to make	main message;	plot		wants to make		main message		
~	63 17884359	The main message the plot wants to make is clear to me.	(message) is clear to me	message; clear	message	clear	be		to viewer		
<b>~</b>	64 17884359	There are enough annotations to help me understand the plot.	There are enough annotations	annotations; enough	annotations	enough	be				to understand
~	64 17884359	There are enough annotations to help me understand the plot.	annotations help me understand the plot	annotations; help understand;	annotations		help understand		plot		
<b>~</b>	65 2097618	The layout allows you to identify/rank communities.		layout; identify; rank; communities	viewer		identify; rank	layout allows	communities		
<b>~</b>	66 2097618	This ordering makes selection easier.		ordering; easier selection	ordering		makes		selection	easier	
$\checkmark$	67 2097618	The resulting distortion does not impact your ability to differentiate the activity level of one group from another.	The resulting distortion does not impact your ability	distortion; impact; differentiate	distortion		impact	not	viewer's ability	to differentiate	
<b>V</b>	67 2097618	The resulting distortion does not impact your ability to differentiate the activity level of one group from another.	your ability to differentiate the activity level of one group from another	differentiate; level	viewer	able	differentiate		activity level	one group from another	
<b>~</b>	68 2097618	The color encoding of the visualization correctly conveys the information expected by you (or that 55 you were given).		color encoding; conveys; information	color encoding		conveys	correctly	information	expected; given	
<b>~</b>	69 86706327	0 I can (easily) explain this graph to friend.		easily explain;	viewer	able	explain	easily	graph; to a friend		
~	70 86706327	0 This graph is easy to comprehend.		easy; comprehend	graph	easy to comprehend	be				
<b>~</b>		It is easy to summarize the main message of this		summarize; main message;				easily; in a			
	71 86706327	0 graph in a paragraph.		paragraph	viewer intended		summarize	paragraph	main message	of this graph	
<b>~</b>	72 19096820	The intended messages or takeaways of this visualization are clear		intended messages; takeaways; clear	messages; takeaways	clear	be				in the visualization
$\checkmark$	73 19096820	It does not take much effort for me to extract information from this visualization		effort; extract; information	viewer		extract	take effort	information		from the visualization
<b>~</b>	74 19096820	The key information in this visualization is clearly, concisely, and saliently presented		key information; presented; clearly; saliently; consisely;	information	key; presented	be	clearly; consisely; saliently			in the visualization
<b>~</b>	75 19096820	16 I have enough information to interpret this chart		information; enough; interpret	viewer		have		information	enough; interpret	to interpret
	<del>75</del> <del>1909682</del> (	16 I have enough information to interpret this chart		information; enough; understand	information	enough	to understand		chart		
~	76 19096820	Inversely Scored - This visualization is cluttered, confusing, or disorienting		cluttered; confusing; disorienting	visualization	cluttered; confusing; disorienting	be				
~	77 19096820	I can determine, at a glance, key facts or information from this chart		determine; at a glance; key fact; key information	viewer	able	determine	at glance	key information; key fact		
~	78 19096820	Inversely Scored - This visualization requires special expertise or skills to interpret		require; expertise; skills; interpret	visualization	interpret	require;		expertise; skills	special;	to interpret
<b>V</b>	79 59257163	When I look at this image, I immediately understand how to recover the data values, and am confident that I know how to extract patterns and relationships in those data	When I look at this image, I immediately understand how to recover the data values	immediately understand; how to; recover; data values	viewer		understand	immediately	how	recover data values	when looking at the visualization

keep	Index	ID	Statement	Splitted propositions	Key_expressions	Subject	Subject_quality	Verb	Verb_quality	Object	Object_quality	Complement
~			When I look at this image, I immediately understand how to recover the data values, and	When I look at this image, I am confident that I know how to								
_	7	79 592571633	am confident that I know how to extract patterns and relationships in those data	extract patterns and relationships in those data	confident; know; how to; extract; patterns; relationships	viewer	confident	know		how	extract patterns; extract relationships	in the data
<b>~</b>	8	80 592571633	I know what this means, and what to do with it		know; means; do	viewer		know		what	it means; do with it	
<b>~</b>		81 592571633	This visualization is intuitive and I can learn from it	This visualization is intuitive	intuitive:	visualization	intuitive	be				
~			This visualization is intuitive and I can learn from it		,							
		81 592571633	· ·	I can learn from it quickly	learn quickly from	viewer	able	learn	quickly	ш		from visualization
✓			((this visualization) clearly show all major patterns ((this visualization has low) [less] visual clutter		show clearly; major patterns clutter	visualization visualization		show	clearly	all major patterns	low	
		03 110301737	(this visualization has a) good balance in overview		Ciuttei	Visualization		have		visual clutter overview details	IOW	
<b>✓</b>	8	84 116381757	and detail		overview; details	visualization		have		balance	good	
<b>~</b>	8	85 591791231	The present visualization provides sufficient details of the data		details; sufficient	visualization		provides		data details	sufficient	
<b>~</b>		86 591791231	The present visualization helps me answer questions, make decisions, and see patterns in data	The present visualization helps me	help;	visualization		help		viewer		answer questions; make decisions; see patterns in data
~			The present visualization helps me answer questions, make decisions, and see patterns in									
	3	86 591791231		helps me answer questions	answer; questions	viewer	able	answer		questions		
<b>~</b>	8	86 591791231	The present visualization helps me answer questions, make decisions, and see patterns in data	helps me make decisions	decisions	viewer	able	make		decisions		
<b>~</b>	8	86 591791231	The present visualization helps me answer questions, make decisions, and see patterns in data	helps me see patterns in data	patterns	viewer	able	see		patterns		in data
~			The present visualization is visually pleasing and easy to understand	The present visualization is visually pleasing	pleasing;	visualization	visually pleasing	be				
~			The present visualization is visually pleasing and	The present visualization is easy								
			easy to understand	to understand	easy; understand	visualization	easy to understand	be				
$\checkmark$	3	88 838199650	The visual representation is easy to read		easy; read	visualization	easy to read	be				
<b>✓</b>	8	89 838199650	Relevant information can be extracted easily from the visual representation		extract easily; information	viewer	able	extract	easily	information		from visual representation
<b>~</b>	Ş	90 838199650	All necessary information is identifiable in the visual representation		necessary information; identifiable	information	all; necessary; identifiable	be				in visual representation
	4	91 <del>510488677</del>	Would you say this image presents, or is generated from data?									
	4	9 <del>2</del> <del>510488677</del>	Would you say you are looking at an image?									
		93 <del>510488677</del>	Would you say you are looking at data?									
$\checkmark$	ç	94 510488677	Would you say this graphic has a clear entry point for understanding the data it presents?	Would you say this graphic has a clear entry point for understanding	clear entry point; understand	graphic	understand	have		entry point	clear	for understanding
	,	04 540400677	Would you say this graphic has a clear entry point for understanding the data it presents?	for understanding the data it presents?	understand; clear entry point	viewer		understand	from clear entry	data	presented	
~			Would you say this graphic has a clear reading direction (visual hierarchy)?	presents:	reading direction; reading direction; visual hierarchy	graphic		have	point	reading direction; visual hierarchy	presented	
<b>~</b>			Would you say the shapes (visual marks) are meaningful in this graphic?		shapes; visual marks; meaningful	shapes; visual marks	meaningful	be				
~			Would you say the colors (visual variables) are meaningful in this graphic?		colors; visual variables; meaningful	colors; visual variables	meaningful	be				
~			Would you say the presentation of information is clear in this graphic?		presentation of information; clear	presentation of information						
✓			It I understand the data to color mapping.		understand; mapping; color	viewer	clear	be understand		mapping	data to color	
<b>V</b>			The spatial arrangement of the visualization It supports my understanding of the data.		spatial arrangement; support; understanding	spatial arrangement		support		understanding	of data	
~	10	01 103338311	I can process the data elements quickly to form an loverview of the result.	I can process the data elements quickly	quickly process; data elements;	viewer	able	process	quickly	data elements		to form an overview
<b>~</b>	10	01 103338311	I can process the data elements quickly to form an overview of the result.	form an overview of the result.	results overview; form;	viewer	able	form		overview	of results	from data elements

keep I	ndex	ID	Statement	Splitted propositions	Key_expressions	Subject	Subject_quality	Verb	Verb_quality	Object	Object_quality	Complement
<b>~</b>	10	103338311	I understand the meaning behind all of the visual components of the image.		understand; meaning; visual components	viewer		understand		visual components meaning	all; of the image	of the image
~			I understand the encoding of the data		understand; encoding	viewer		understand		data encoding	all, of the image	or the image
			I can recognize main characteristics of the data		recognize; data characteristics;	viewer	able	recognize		data characteristics	main	
					extract; data values; concrete;			, , , , , , , , , , , , , , , , , , ,				
~	10	05 206912797	I find it difficult to extract concrete data values		difficult	viewer		extract	difficult	data values	concrete	
~	10	06 121698407			clearly tells; needs to know	visualization		tells	clearly	what	viewer needs to know	
~	10	7 121698407	The visualisation summarises what I need to know in a clear and informative way.		clearly summarize; informative; needs to know	visualization		summarize	clearly; informative	what	viewer needs to know	
	10	08 121698407	It is easy to read what I need to know from the visualisation.		easily read; needs to know	viewer		read	easily	what	viewer needs to know	from visualization
~	10	9 451138272	It is easy to see the main data trend in this visualization.		easily see; data trend	viewer		see	easily	data trend	main	in visualization
~	11	10 451138272	It is easy to identify relevant outliers in this visualization.		easily identify; relevant; outliers	viewer		identify	easily	outliers	relevant	in visualization
	1	11 451138272	It is easy to answer question "Which of the <xxx> is <yyy>iest?", given this visualization.</yyy></xxx>		easily; answer; question	viewer		answer	easily	question		given visualization
~	11	12 276369984	Can you comprehend the information from the shown visualization?		comprehend; information	viewer	able	comprehend		information		from visualization
~	11	13 276369984	Can you read the caption, legend ad relate those while extracting the insight from the shown visualization?	Can you read the caption, legend and relate those	read; relate; caption; legend	viewer	able	read; relate		caption; legend		while extracting insight
~			Can you read the caption, legend ad relate those while extracting the insight from the shown visualization?	while extracting the insight from the shown visualization?	extract; insight	viewer	aule	extract		insight		from visualization
<b>V</b>	11	14 276369984	Can you iterate the extracted insight from the shown visualization in one sentence and timely manner?		iterate; timely; one sentence; insight	viewer	able	iterate	in one sentence; in timely manner	extracted insight		from visualization
$\checkmark$	11	15 276369984	You can easily describe what information you learnt from the shown visualization.		easily describe; information; learned	viewer	able	describe	easily	information	learned	from visualization
~	11	16 164746324	I understand the message the visualization communicates.		understand; message; communicated	viewer		understand		message	communicated	by visualization
~	11	17 164746324	It is easy to find relevant patterns in the data.		find easily; patterns; relevant	viewer		find	easily	patterns	relevant	
<b>~</b>	11	18 164746324	I could use this visualization to communicate patterns in the data to others.		communicate; patterns; others	viewer	able	communicate	using visualization	patterns; to others	in data	
~	11	19 164746324	I can infer relevant relationships in the data from the visualization.		infer; relevant relationships	viewer	able	infer		relationships	relevant; in data	from visualization
~	12	20 164746324	The visualization presents the data clearly.		present clearly	visualization		present	clearly	data		
$\checkmark$			The visualization is readable		readable	visualization	readable	be				
~	12	22 165885950	The visualization is easy to understand		easy; understand	visualization	easy to understand	be				
<b>~</b>	12	23 165885950	•		understand; conveys	viewer		understand		what	visualization conveys	
$\checkmark$	12	24 165885950	The visualization makes it easy to understand the data		make easy; understand	visualization		make		understand data	easy	
~	12	25 152740791	I can easily interpret what the visual items (lines, colors, shapes, etc.) represent		interpret; represent; visual items; lines; colors; shapes	viewer	able	interpret		what	represent; visual items; lines; colors; shapes	
~	12	26 152740791	I can easily interpret the overall meaning or message of the visualization		interpret; meaning; message; overall	viewer	able	interpret		meaning; message	overall; of visualization	
<b>✓</b>	12	27 152740791	I find the visualization confusing to understand		confusing; understand	visualization	confusing	be		to understand		I find
<b>~</b>	12	28 152740791	I know exactly what the visualization is trying to communicate		know exactly; communicate	viewer		know	exactly	what	visualization try to communicate	
~	12	29 942263669	I can easily understand how the underlying data is encoded in this graph.		easily understand; how; encoded data	viewer	able	understand	easily	how	data is encoded	in graph
~	13	30 942263669	There are some parts of the visualization that are difficult to interpret.		some parts; difficult; interpret	some parts of visualization	difficult to interpret	be				
~	13	31 942263669	I can think of things I would want to change about how the data is visually represented in this graph.		data; visually represented	viewer	want to	change		how	data is visually represented	I think