## **Lispy — Short & Sweet Semantically Aware Lisp Editing**

<u>Description</u>	Key	Function	Note	
Lispy:	The <u>lispy</u> minor mod	e provides modal-like editi	ing to Emacs for Lisp-like languages with very few keys when point is before ( or after ) "paren".	
Context-based	<ul> <li>On other locations interpreted as list</li> </ul>		point (the cursor) is before the left, opening, paren or after the right, closing paren, the keys are	
modal editing of	This table lists the lispy command keys, with links to the <u>Lispy function Reference</u> for each one.  This requires the <u>lispy</u> external package.  PEL downloads, installs and activates lispy when the <b>pel-use-lispy</b> user option is set to <b>t</b> .			
Lisp code			JPEL downloads, installs and activates lispy when the pel-use-lispy user option is set to t.  s a file of a specified mode, include the major mode in the PEL user-option pel-modes-activating-lispy.	
Ref: Lispy function			najor mode by default. That's OK to learn lispy by activating it for testing. But once you learn and are	
Reference	comfortab	le with it you will want to a	activate when the file is opened automatically by adding the major mode in that list.	
∑ Customize PEL use of	<f11> <f2></f2></f11>	(pel-cfg-pkg-lisp	Prompt to customize:	
Lispy and Lispy itself.	SPC M-L	&optional OTHER- WINDOW)	PEL lispy support for Emacs Lisp and Common Lisp     lispy itself.	
			If OTHER-WINDOW is non-nil (use C-u), display in another window.	
Toggle <u>Lispy</u> mode See also:	• <f12> M-L</f12>	(pel-lispy-mode &optional ARG)	Toggle lispy-mode on/off. Lispy is a minor mode for navigating and editing LISP dialects.	
• PI - Common Lisp	• <m-f12> M-L</m-f12>	Roptional Arta)	Requires lispy external package.  PEL downloads, installs and configure it when pel-use-lispy user option is set to t. Please read the information on lispy web site.	
• <u>≴</u> ₿ῦ - Emacs Lisp	<f11> SPC 1 M-L</f11>		pel-lispy-mode calls lispy-mode but also prepares hydra, loaded dynamically with PEL.	
			Set the pel-modes-activating-lispy user-option to activate lispy automatically for major modes.	
Getting Code Help	Use the following key	s to pop information insid	le the current window or into a help buffer. See the <u>N Help/Info</u> table for more help commands	
See also: <u>▼ Help/Info</u>	• The <f12> 1 and</f12>	d <f12> 2 PEL keys are</f12>	available even when lispy mode is off.	
Describe function at	C-1	(lispy-describe-inline)	Display documentation of current Lisp function (or variable if marked) as a pop-up overplayed window.	
point	.510. 1		If docstring is too long it is displayed inside a *lispy-help* buffer.  The fact of t	
See Also: <u>∑ Help/Info</u>	<f12> 1</f12>		The <f12> 1 key can be used even when lispy mode is not active.</f12>	
Describe function arguments	C-2	(lispy-arglist-inline)	Show the argument list of current function.	
<u>argumento</u>	<f12> 2</f12>		The <f12> 2 key can be used even when lispy mode is not active.</f12>	
Describe function/	xh	(lispy-describe)	A shorthand for describe-function or describe-variable, showing help in the *Help* buffer.	
<u>variable</u>		<b>n</b>	If you want to call describe-variable, you should mark the symbol first.	
Show top level form	xw	(lispy-show-top-level)	Show top-level form containing point on mode-line. Eg. inside a defun, show defun name & args.	
Numeric			d as straight numbers: there's no need to use M-2 to provide the argument 2, just type 2.	
Arguments in Lispy		The state of the s	bllowed by $\mathbf{c}$ to create 4 clones of the following S-expression (sexp). re $\mathbf{c}$ or after $\mathbf{c}$ . You can also type numerical arguments with the Meta key prefix for some commands in	
	• This is true only when point is just before ( or after ). You can also type numerical arguments with the Meta key prefix for some commands in other positions, such as the ] and [ keys.			
Miscellaneous	Here's a set of commands you might need to use very early when using lispy.			
<u>undo</u>	u	(special-lispy-undo)	Deactivate region and 'undo'.	
View: center current sexp	v	(special-lispy-view)	Recenter current sexp to be on the first line of the window. vv recenters back to the original position.	
Multiple Cursors		ispy supports operations on multiple cursors, allowing concurrent visible operations on several spots in the current window.		
See: <u>Sersor</u> .	Requires the external multiple-cursors package. DEL activates it when pel-use-multiple-cursors is set to t.			
Set multiple cursors	xm	(lispy-cursor-ace)	Add a cursor at a visually selected paren using an Avy target.	
Add extra cursor(s)			Only one cursor can be added with local binding. Any amount can be added with a global binding.     Return to single cursor with C-q	
Add cursors down	C-7	(lispy-cursor-down	Add ARG cursors using 'lispy-down'.	
See: <u>See: Cursor.</u>		ARG)	I found that using the multi-cursor commands directly works well, and often better, than this command.	
	<f12> 7</f12>		ce. See other code re-formatting commands in the "Reformat Code" section below.	
Insert	The following keys in	sert and modify writespace		
Context sensitive space insertion	SPACE> (lispy-space ARG) Insert one space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with position depending on ARG: If ARG is 2, amend the current list with a space, with a space and		Insert one space, with position depending on ARG: If ARG is 2, amend the current list with a space from current side. If it is 3, switch to the different side beforehand.	
	• If jammed between parens, "( (" unjam: "(  (".			
	If after an opening	delimiter and before a spa	ace (after wrapping a sexp, for example), do the opposite and delete the extra space, "(  foo)" to "( foo)".	
	o <space></space>	(special-lispy-other-	Alternative to 'lispy-space': leave point on the other side.	
Insert a new indented line	• C ==	(lieny-newline-and-	Insert new line and indent next line appropriately	
moert a new muented line	• C-m • RET	(lispy-newline-and- indent-plain)	Insert new line and indent next line appropriately	
Insert a colon	:	(lispy-colon)	Insert a colon and precede it by a space in situations where a tag could be written.	
Insert a caret	^	(lispy-hat)	Insert a caret and precede it by a space in required situations. Used for Clojure metadata marker.	
Commenting	Lispy provides the		exp the follows point, as opposed to the standard M-;, also available, which creates a comment at the end	
		olock is marked both comr		
Inserting comment	;	(lispy-comment	Comment ARG sexps. On beginning of line comments with ;; then ;;; ###autoload	
		&optional ARG)	• C-u ; un-comments.	
Insert pairs	The following comma	ands insert pairs of delimit	ers or quotes. They can be typed anywhere.	
insert a paren pair	(	(lispy-parens ARG)	Insert a () parenthesis pair, leave point inside.	
Insert a paren pair after	C-8	(lispy-parens-down)	Exit the current S-expr and insert a () parenthesis pair , leave point inside.	
end of current list	<f12> 8</f12>			
Insert []	}	(lispy-brackets ARG)	Insert a [] pair, leave point inside.	
Insert { }	{	(lispy-braces ARG)	Insert a { } pair, leave point inside.	
Insert " "	u u	(lispy-quotes ARG)	Insert a pair of quotes around the point. When the region is active, wrap it in quotes instead.	
		<u> </u>	When inside string, if ARG is nil quotes are quoted, otherwise the whole string is unquoted.	
Delete	1 1 1		mands, but does not bind the <b><deletechar></deletechar></b> key (the 🖾 key, available as <b>Fn</b> 🖾 on Apple laptops).	
Soo also: W Cot 9 Barts		· ·	sion at point. It deletes a complete list when point is on the parens.  e list enclosing point as long is inside the list and not on a parens.  See <u>S Cut &amp; Paste</u>	
See also: Cut & Paste			·	
Delete sexp forward	C-d	(lispy-delete ARG)	Delete ARG chars or sexps depending on context. Delete sexp, string when point is at the beginning of the sexp or string. When point is at end of sexp/string, delete any trailing whitespace and move to beginning of sexp/string to allow using C-d again to delete the sexp/string.	
Delete sexp backward	DEL	(lispy-delete-	From ") ", delete ARG sexps backwards.	
		backward ARG)	Otherwise ('backward-delete-char-untabify' ARG).     Useful to remove all spaces between a paren and the previous one.	
			- Oseral to remove an spaces between a paren and the previous offe.	

<u>Description</u>	Key Function Note		Note
Mark a region	Mark S-expression w	ith the following command	ds. See the command <b>a</b> above: it allows marking any symbol using avy.
Mark symbol	M-m	(lispy-mark-symbol)	Mark current symbol. Can be issued anywhere.
Mark/Unmark list &	m	(special-lispy-mark- list ARG)	Mark the current sexp, moving point to the other end.  • If mark is already active, deactivate it instead. When ARG is more than 1, mark ARGth element.
mark car: select car of marked list	i	(lispy-mark-car)	Mark the car of <b>currently active region</b> . Moves point after the first symbol in the list.
Grow marked area: include next/prev sexp	>	(special-lispy-slurp ARG)	Grows marked S-expression to include next.
Shrink marked area: exclude next/prev sexp	<	( <b>special-lispy-barf</b> ARG)	Shrink marked S-Expression: exclude the one at current end of list of marked S-expressions.
Kill, Copy & Paste See also: <u>Set &amp; Paste</u>	Lispy kill commands below maintain the consistency of the list parens.  PEL provides commands to kill and copy S-expressions when point is inside and not on parens: <f11> - ( and <f11> = ( See Cut &amp; P</f11></f11>		
Kill string or list at point	C-, <f12> DEL</f12>	(lispy-kill-at-point)	Kill the quoted string or the list that includes the point.  ➡ The C-, key binding is not available in terminal mode. PEL provides the <f12> DEL alternative.</f12>
Kill word forward	M-d	(lispy-kill-word ARG)	Kill ARG words, keeping parens consistent.
Kill word backward	M-DEL	(lispy-backward-kill- word ARG)	Kill ARG words backward, keeping parens consistent.
Kill line	C-k	(lispy-kill)	Kill line, keeping parens consistent.
Kill from point to end of list	M-k	(kill-sentence &optional ARG)	Kill from point to end of list.  • With arg, repeat; negative arg -N means kill back to Nth start of list.
Copy region or sexp to kill ring	n	(special-lispy-new-copy)	Copy marked region or sexp to kill ring.
Paste	P	(special-lispy-paste ARG)	When region is active, replace it with current kill. Forward to yank otherwise.  • When ARG is given, paste at that place in the current list.
Navigate with avy commands	<ul> <li>By default the scor</li> </ul>	oe is the current list. Use	r(s) identifying the target to move to that word and select it.  Avy is similar to Ace. Lispy uses Avy internally.  They all use avy navigation.
ace symbol move  ARG sets target scope  ace highlight targets  move to selected word  and mark it	a ©*	(special-lispy-ace- symbol ARG)	Jump to a symbol within the current S-exp and mark it.  • Each symbol in S-exp is shown with highlight letter: type that letter to move to the symbol.  • S-exp scope is obtained by exiting the list ARG times: default is 1: current S-exp. to select a larger scope S-exp, use a numeric argument:  • Example: 3a selects 3 layers of enclosing S-exp to select ace targets.
ace sub-word  • ARG sets target scope  • ace highlight targets  • move to selected sub-word and mark it	- @*	(special-lispy-ace- subword ARG)	Similar to lispy-ace-symbol, but selects a subword instead.  • S-exp scope is obtained by exiting the list ARG times: default is 1: current S-exp. to select a larger scope S-exp, use a numeric argument:  • Example: 3a selects 3 layers of enclosing S-exp to select ace targets.
Move to Ace target symbol & erase to replace	н 🎯*	(special-lispy-ace- symbol-replace ARG)	Jump to a symbol within the current sexp and <b>delete it</b> , leaving point at location to type the new symbol.  • Sexp is obtained by exiting the list ARG times.  • Calls lispy-ace-symbol and deletes the selected symbol.
Move to Ace paren target	g ©	(special-lispy-ace- paren &optional ARG)	Highlights each <b>symbol</b> in current sexp as ace target and jump to the selected one.  • Updates lispy-back history.  • S-exp scope is obtained by exiting the list ARG times: default is 1
Move to Ace target char	Q (special-lispy-ace-char) Prompts for character, highlights each one in current sexp as ace target and jump to the selected one.		
Navigate by-list	The following commands move point inside code when point is before left paren or after right paren. Use <b>d</b> to switch side to control direction.  The <b>z</b> key starts the <b>knight movement hydra</b> providing access to the <b>j</b> knight-down and <b>k</b> knight-up. Use <b>z</b> , or any key but <b>j</b> or <b>k</b> to stop the hydra.		
Move left outward	h (special-lispy-left ARG) Move outside list backwards ARG times.		Move outside list backwards ARG times.
Move down current list  never exit current list from beginning of top level form to the next	j <u></u>	(special-lispy-down ARG)	Move down ARG times inside current list.  • With point at the top level move to the next top-level form. Inside a list move to each  • Guaranteed to never exit the list: 99j moves to the last element of the current list.  • Moves downward to next to comment if issued from point at start of comment line (on the;;).
Move down left-most parens on each line	• zj • j	(lispy-knight-down)	Move down left-most paren to the next line (can exit list).
Move up current list  never exit current list  from end of top level form to previous one	k Ť	(special-lispy-up ARG)	Move up ARG times inside current list.  Guaranteed to never exit the list: 99k moves to the first element of the current list.  Moves upward to previous to comment if issued from point at start of comment line (on the ;;).
Move up left-most parens on each line	• zk	(lispy-knight-up)	Move up left-most paren to the previous line (can exit list)
Move outside list forward .	1 /	(special-lispy-right ARG)	Move outside list forwards ARG times.  • Parens in strings and comments are ignored.
Flow via current paren ♣  · ( → down  · ; → down  · ) → up	f ,	(special-lispy-flow ARG)	Move in the direction of current paren inside current list and then to the next/previous list:  • At left: move to next left paren (move going down the file or into the list).  • Move forward into a list, then each sub-list, then to beginning of next top-level list.  • At right: move to previous right parent (move going up the file).  • Don't enter strings or comments.
Move to beginning of current defun	A	(special-lispy- beginning-of-defun &optional ARG)	Forward to beginning-of-defun. When called twice in a row, restore the previous point and mark positions.
Move to beginning of line. Reveal Outline	C-a	(lispy-move- beginning-of-line)	Move to beginning of line
Move to end of line.  In string: to end of string.  Again: back to original	С-е	(lispy-move-end-of- line)	Forward to 'move-end-of-line' unless already at end of line.  • Then return to the point where it was called last, when it was in a string, back to the end paren close to where it was.  • If this point is inside string, move outside string.
Move forward to end of list  from beginning of top level form to the next	1 →	(lispy-forward ARG)	Move forward list ARG times or until error.  • Can type it from any location, even when point is not before the beginning or after the end of a list.  • Also active inside strings and comments. Use } to insert a [ ] pair.
Move backward to beginning of list from end of top level form to previous one	- 1	(lispy-backward ARG)	Move backward ARG times to beginning of previous list, up to out of current top-level list and then to previous top level-list.  • © Can type it from any location, even when point is not before the beginning or after the end of a list.  • Also active inside strings and comments. Use } to insert a [] pair.

<u>Description</u>	Key Function Note			
Move to different (other) side of sexp			Switch to the different side of current sexp.  • If before '(' move after ')' and vice-versa.	
Move outside list forward	C-3 / <f12> 3 /</f12>	(lispy-right ARG)	Move outside list forwards (up level and right) ARG times. Ignore parens in strings.  • With no argument, or using Meta prefixed numerical arguments, this key can be typed anywhere.  • Just outside parens the argument can be typed as strength numbers.	
Move outside list forward but self-insert inside	)  (lispy-right-nostring ARG)  Same as lispy-right: move outside list forwards (up level and right) ARG times.  • However self-insert when point is located in a string or a comment.			
Navigation History	To restore past positi	ons type <b>b</b> around parer	s. The commands marked with 🕭 update lispy back history.	
Move back	b	(special-lispy-back	Move point to ARGth previous position in lisps-back history.	
	• Lispy back history updated by: <b>f</b> , <b>h</b> , <b>i</b> , <b>j</b> , <b>k</b> , <b>1</b> , <b>m</b> , and <b>q</b> . These commands are identified with		<ul> <li>If position isn't special, move to previous or error.</li> <li>Lispy back history updated by: f, h, i, j, k, l, m, and q. These commands are identified with</li> </ul>	
Search			cific list scope. See <u>Search/Replace</u> for more search operations, including the unbounded occur search.	
Occur search inside the current top-level sexp	У	(special-lispy-occur)	Do an occur for the current top-level sexp. Go back-to-paren afterwards.  This is useful e.g. to see where a particular variable is used within the current defun.	
Goto Definition	• Some of the comm	nands prompt using the iv	e cross reference system available to jump to the definition of the specified symbol.  y completion mechanism. More information on input completion is available in <u>Sompletion/Input</u> h the <b>og</b> prefix the next letter is interpreted within this group. To get out you must type the letter <b>q</b> .	
goto definition using directory tags	g	(special-lispy-goto &optional ARG)	Jump to symbol within files in current directory. Prompt for symbol and jump to it.  • When ARG isn't nil, call 'lispy-goto-projectile' instead.  • See <u>lispy goto wiki page</u> .	
goto definition in local file	G	(special-lispy-goto- local &optional ARG)	Similar to lispy-goto, but only current file's tags are used instead of whole directory's tags.	
Follow: jump to definition	F	(special-lispy-follow)	When region is active jump to the definition of marked symbol. Otherwise jump to the definition of the first symbol in current sexp.	
	M	(lispy-goto-symbol SYMBOL)	• M can be issued from any position.	
Move back from symbol definition jump	D	(special-pop-tag- mark)	Go back from where it came with Follow.	
	м-,	(pop-tag-mark)	M-, can be issued from any position.	
Move to definition of selected lisp element	oga	(special-lispy-goto- def-ace ARG)	Jump to definition of selected element of current sexp.  • Sexp is obtained by exiting list ARG times.	
Move back: pop tag	ogb (special-pop-tag- mark) Pop back to where M was last invoked.		Pop back to where M was last invoked.	
Move to symbol within files of current directory	(special-lispy-goto ARG)  Jump to symbol within files in current directory.  • When ARG isn't nil, call 'lispy-goto-projectile' instead.			
Move to Elisp command pithing current file	oge	(special-lispy-goto- elisp-commands)	Jump to Elisp commands within current file. Prompts using ivy completion mechanism.  • When ARG is non-nil, force a reparse.	
Follow to the function definition	ogf	(special-lispy-follow)	Follow to 'lispycurrent-function'.	
Jump to definition of ARgth element of current list.	ogj	(special-lispy-goto- def-down)	Jump to definition of ARGth element of current list.  Super this when an argument is a function call. This moves point to the definition of that function.	
Jump to definition of symbol	ogl	(special-lispy-goto-local)	Jump to symbol within current file. Prompts with ivy.  • When ARG is non-nil, force a reparse.	
goto definition using projectile base directory	• 0g • ogp	(special-lispy-goto- projectile)	Jump to symbol within files in ('projectile-project-root').	
Quit the 'og' command	ogq	(special-lispy-quit)	Remove modifiers.	
Jump to definition of symbol at point	ogr	(special-lispy-goto-recursive)	Jump to symbol within files in current directory and its subdirectories. ⚠ Potentially long search process.  • Search tags in complete directory tree. Stop with <b>c</b> - <b>g</b> .	
Narrow/Widening	Narrowing hides everything in the buffer except the selected region, allowing work on that region alone.     Widen it back to see the complete buffer again.			
See also: Narrowing  Narrow current sexp	N	(special-lispy-narrow	Narrow current sexp or region.	
region		ARG)		
Widen Operating on	W The commands listes	(special-lispy-widen)	Widen back to see the complete buffer.  perate on a marked region of code:	
Regions	Activate a region first with one of:  m To mark a sexp.  a To mark a symbol by its ace target letter. Use numeric argument to widen scope out of current list.  Select another sexp within the list with:  j To select the next sexp in the current list.  k To select the previous sexp in the current list.  First select the region growing side. The grow/shrink operations apply to the current side of the region. Move point to the other side of the region with:  d to move to the other side of the region.  Grow or shrink the region with:  Selects the region with another sexp on the current side.  Shrinks the region by one sexp on the current side.  Shrinks the region by one sexp on the current side.  I To mark the entire parent list with the point at the beginning.  To reduce the mark to only the first child (the car) of the current list  Operate on the region:  m Deactivate the region and undo.  C Clone region and keep it active.  Move region on sexp down.  Move region on sexp down.  Move region inside sexp selected with ace target  C Convolute: exchange the order of application of two S-exprs that contain region  Replace region with current kill.			

<u>Description</u>	Key	Function	<u>Note</u>
Reformat code	The following comma	and do not modify the sem	nantics of the code, they just add or remove whitespace.
Indent S-expression	i	(special-lispy-tab)	Update the indentation of all lines in the current S-expression.
Turn current sexp into one line	О	(special-lispy-oneline)	Turn current sexp into one line. Move comments ahead of sexp.
<del></del>			<pre>(progn   (one)   (two)   (three))</pre>
Convert current sexp into multi-line	М	(special-lispy-alt- multiline &optional SILENT)	Spread current sexp over multiple lines. When SILENT is non-nil, don't issue messages.  • Especially useful on results of macroexpand.   The wrapping may not occur for small lists or symbols.  (progn (one) (two) (three))
			<pre>(one)   (two)   (three))</pre>
Transform code	Lispy provide a large	number of code transform	mation commands. Once you know them they speed up Lisp code editing.
clone	С	(special-lispy-clone	Clone sexp ARG times.
		ARG)	• When the sexp is top level, insert an additional newline.  ((one) (two) (three)) ((one) (two) (three))
Transform S-expr	The following operati	ons essentially move or m	nodify S-expressions. Use these to write and refactor code.
Slurp: grow either current sexp or region	>	(special-lispy-slurp ARG)	<ul> <li>Grow either current sexp or region (if it's active) in appropriate direction. Opposite of lispy-barf.</li> <li>With an arg of 0, grow as far as possible.</li> <li>With an arg of -1, grow until the end of the line where the current sexp ends or as far as possible before that position.</li> <li>(progn (foo) (bar)) → &gt; → (progn ((foo) bar))</li> </ul>
Barf: shrink either current	<	(special-lispy-barf	<pre>(progn (foo)_(bar)) → &gt; → (progn (foo (bar)))_</pre> Shrink either current sexp or region (if it's active) in appropriate direction. Opposite of lispy-slurp.
sexp or region		ARG)	(progn (foo) (bar)) $\rightarrow$ < $\rightarrow$ (progn (foo))_(bar)  (progn (foo) (bar)) $\rightarrow$ < $\rightarrow$ (progn (foo) () $\underline{b}$ ar)
Move current sexp to the	oh	(special-lispy-move-	Move current sexp (or marked region) to the left, outside current list, ARG times.
<u>left</u>		left)	<pre>(progn</pre>
Move current sexp inside first element of list below	oj	(special-lispy-down-	Move current sexp or region to become the first element of next sexp.
irst element of list below		slurp)	(100) '((200) (300)) '(200) (300))
Move current sexp to become last element of list above	ok	(special-lispy-up-slurp)  Move current sexp or region to become the last element of the list above.  If the point is by itself on a line or followed only by right delimiters, slurp the point into the previous training to the next level and adjusting the parentheses accordingly.	
			(progn       (do-this)         (do-that)       (do-that)         (do-it-again)       (do-it-again)
Move current sexp to the right, outside current list	ol	(special-lispy-move-right)	Move current expression (or marked region) to the right, outside the current list. Do it ARG times.  (progn (do-this) (do-that) (do-it-now)) (do-this) (do-that))
Join List	+	(special-lispy-join)	Join next/previous element into current list, as in the next 2 examples.
			((one two) (three))
			((one) (two) (three)) ((one two) (three))
Split List	M-j	(lispy-split)	Split S-expressions from character at point as shown in the 4 examples below.  (111 222 333)  (1 111 222 333)
			(111 <u>2</u> 22 333) (111) (222 333)
			(111 2 <u>2</u> 2 333) (111 2) (22 333)
			((one) (three)) ((one)) ((two) (three))
Raise: use current sexp as replacement for its parent	r	(special-lispy-raise ARG)	Use current sexp or region as replacement for its parent. Do so ARG times.  (let ((total 0))
Raise: current and next  previous sexp as replacement for their	R	(special-lispy-raise- some)	Use current sexp and the following (if called from the left), or the preceeding (if called from the right) sexps, or the active region as replacement for their parent.
parent			<pre>(progn</pre>
Convolute: Exchange the order of application of 2 closest outer forms	С	(special-lispy- convolute ARG)	Exchange the order of application of two closest outer forms, relative to current expression or region.  • Replace ((,,, (with (,,,( (where and ,,, is arbitrary code.  • When ARG is more than 1, pull ARGth expression to enclose current sexp.  • When ARG is nil, convolute only the part above sexp.
Example animation			<pre>(if (&gt; (+ count1 count2) 30)</pre>
Move current sexp up	W	(special-lispy-move- up ARG)	Move current sexp or region up arg times. Don't exit the parent list. Also works for outlines.  (progn (one) (two) (three) (three))

<u>Description</u>	Key	Function		Note
Stringify current sexp	• S	(special-lispy-stringify &optional ARG)	Transform current sexp into a string. Quote newlin	nes if arg isn't 1.
	• C-u "	Roptional And)	<pre>(progn (one) (two) (three))</pre>	"(progn (one) (two) (three))"
Move sexp down in list	s	(special-lispy-move- down ARG)	Move current sexp or region down arg times. Don't  (progn (one) (three) (two))	t exit the parent list. Also works for outlines.  (progn (one) (two) (three))
Splice the current list into the parent list	/	(special-lispy-splice ARG)	Splice ARG sexp into the containing (parent) list. M direction. If there are none within the parent list, mo	love the point to the next list to splice in appropriate ove to the parent list in appropriate direction.  (a 1b) (c))
Teleport: move current sexp to Ace target	t ©	(special-lispy-teleport ARG)	Move current sexp to Ace target inside current fund  • Use numerical argument to move that many sext in the example below, after typing the ace target apprognate bone to the composition of three the composition of the comp	
	tt ©*		Move current sexp to Ace target to any sexp inside	e current window. Same as above with a wider scope.
Reverse list	• xR • x?R • x C-h R	(lispy-reverse)		s quote ly-raw as the last element of the new list. ne quote, then reverse and put the quote back.  ((three) (two) (one) progn)  ((111 222 333) quote ly-raw)  (333 222 111)
Refactoring	The following comma	ands provide refactoring fa	cilities.	
turn nested if into cond	• xc • x?c • x C-h c	(lispy-to-cond)	Transform current 'if' expressions to equivalent 'co  (if is-one	<pre>(cond (is-one</pre>
turn cond into nested if expressions	• xi • x?i • x C-h i	(lispy-to-ifs)	Transform current 'cond' expression to equivalent '  (cond (is-one	<pre>(if expressions.   (if is-one</pre>
Bind var: current sexp to let bound variable	• xb • x?b • x C-h b	(lispy-bind-variable)	Transform the current list expression into a let-bour variable. Use M-m to finish naming the variable.  • Bind current expression as variable.  • 'lispy-map-done' is used to finish entering the variant mark-symbol' can also be used.  ((one) (two) (three))  After issuing the xb command type the name of the variable (like new-var) here. It shows inside the definition block and just outside.	rind variable; iedit-mode is used to name the new  ariable name. The bindings of 'lispy-backward' or 'lispy-  (let (( ((one) (two) (three))))  _)  (let ((new-var ((one) (two) (three))))  new-var)
Unbind a let bound variable	жu	(lispy-unbind-variable)	Substitute let-bound variable  • Unbind a let-bound variable. Also works for Cloj  Current version fails to update the values of the (defun foobar () (let (x 10) (y 20) (z 30)) (foo1 x y z) (foo2 x z y) (foo3 y x z) (foo4 y z x) (foo5 z x y) (foo6 z y x))	
Inline current function or macro call	• xf • x?f • x C-h f	(lispy-flatten ARG)	Inline current function or macro call, i.e. replace it v • The function should be interned and its body fine • Pass the ARG along.  (setq-local foo 10)	
Inline current function/	• xF	(lispy-let-flatten)	Inline a function at the point of its call using 'let'.	
macro call with a let	• x?F • x C-h F		Given the following defun on the right:  Typing xF to the code below transforms it in the code to the right below.  (defun sum-squared (a b)  "Sum of A squared + B squared."	<pre>(defun add (a b)    "Add A and B."    (+ a b))  (defun sum-squared (a b)    "Sum of A squared + B squared."    (let ((a (* a a))</pre>
turn current lambda into a defun	xd	(lispy-to-defun)		into a defun.  e the lambda S-expression by the function quoted name Use C-y later to insert the defun inside a buffer.  (mapcar #'square

<u>Description</u>	Key	Function	<u>Note</u>	
Create defun out of marked block	xD	(lispy-extract-defun)	Extract the marked block as a defun.     Prompts for the name of the new defun, turn the below.	
		Starting with the following code, issue the xD command at the beginning of the form to extract  Lispy extracts the code, prompts for a new function name and	• For the defun to have arguments, capture them w  (defun some-func (&optional count)     "Do something."     (if count	untdown: %d\n" count))
		insert the new function above the existing one.	<pre>(setq count (1- count))     (&gt; count 0))))  (defun some-func (&amp;optional count)     "Do something."     (if count</pre>	
Transform current sexp/ region into a function call	xk	(lispy-extract-block)	Transform the current sexp or region into a function  The newly generated function will be placed abov  Starts the input for the new function name and ar	e the current function.
			<pre>(cond (is-one</pre>	<pre>(defun ()   (cond (is-one</pre>
			After typing <b>xk</b> a name-less defun form is created above an empty form. Then type the name of the defun followed by the name of the arguments which will be populated in both forms as shown to the right.  To complete, type [ and point will move to the right of the coming parens.	<pre>(defun new-func (is-one is-two is-three)   (cond (is-one</pre>
turn current defun into a lambda	хl	(lispy-to-lambda)	Turn the current function definition into a lambda.  (defun add (a b)  "Add 2 numbers."  (+ a b))	(lambda (a b)  "Add 2 numbers." (+ a b))
Eval sexp and replace it with its result	xr	(lispy-eval-and- replace)	Eval current expression and replace it with the result delete-dups (sort '(3 1 7 5 3 4 2 3 4 2 3 4 5 7)	
Toggle between last threaded macro form and unthreaded form	x>	(lispy-toggle-thread- last)	Toggle current expression between the last-thread  (+ 40 (- (/ 25 (+ 20 5))))  (thread-last (+ 20 5) (/ 25) (-) (+  As the example shows, the thread-last code is n help proposes this instead:  (thread-last 5 (+ 20) (/ 25) - (+ 40))  • The macro used used may be customized in 'lisp Emacs Lisp thread-last macro.	40)) ot always created in the nicest-looking way. Emacs
<b>Outline Operations</b>				
Toggle org-mode-like outline	I	(special-lispy-shifttab)	Hide/show outline summary.	
Promote outline level	<pre>• <m-right> • <m-s-right></m-s-right></m-right></pre>	(lispy-outline-promote)	Promote current outline level by one.  In terminal mode <m-right> may not work, it  However <m-s-right> is always bound to li</m-s-right></m-right>	
Demote outline level	<pre>• <m-left> • <m-s-left></m-s-left></m-left></pre>	(lispy-outline-demote)	Demote current outline level by one.  In terminal mode <m-left> may not work, it m  However <m-s-right> is always bound to li</m-s-right></m-left>	•
Move to next visible heading line	J	(special-lispy-outline- next ARG)	Move to the next visible heading line.  • With ARG, repeats or can move backward if nega  • A heading line is one that starts with a *** (or that	
Move to previous visible heading line	K	(special-lispy-outline- prev ARG)	Move to the previous heading line.  • With ARG, repeats or can move forward if negativ.  • A heading line is one that starts with a "* (or that	'outline-regexp' matches).
Evaluate Code			ion into Emacs Lisp code and to some extent code vondel for procedure described in classic Structure a	vritten in other language. and Interpretation of Computer Programs in action.
Eval last sexp	е	(special-lispy-eval ARG)	Eval last sexp. Display result in echo area.  • When ARG is 2, insert the result as a comment.	
Eval current region sexp.	Е	(special-lispy-eval- and-insert)	Eval current region or sexp. The result will be inserted	ed in the current buffer after the evaluated expression.
Eval current sext & replace it at point	xr	(lispy-eval-and- replace)	Eval last sexp and replace it with the result.	
Eval current sexp in the content of the of the other window	p	(special-lispy-eval- other-window &optional ARG)	Eval current expression in the context of other wind.     In case the point is on a let-bound variable, add a     When ARG is non-nil, force select the window.	ow. a 'setq'.

<u>Description</u>	Key	Function	<u>Note</u>	
Evaluate current expression for current language	xv	(lispy-eval-expression)	Like 'eval-expression', but for current language (Emacs Lisp, Common Lisp, Clojure, etc)	
<b>EDegug Support</b>	_		use and stop an Emacs Lisp edebug session or Clojure cider debug session.	
EDebug current defun See also:  全科I - Emacs Lisp	xe	(lispy-edebug ARG)	Start/stop edebug of current thing depending on ARG.  • ARG is 1: 'edebug-defun' on this function.  • ARG is 2: 'eval-defun' on this function.  • ARG is 3: 'edebug-defun' on the function from this sexp.  • ARG is 4: 'eval-defun' on the function from this sexp.	
	1xe	(edebug-defun)	Evaluate the top level form point is in, stepping through with Edebug.	
	2xe	(eval-defun EDEBUG- IT)	Evaluate the top-level form containing point, or after point.	
	3xe	(edebug-defun)	Evaluate the top level form point is in, stepping through with Edebug. On the function from this sexp.	
	4xe	( <b>eval-defun</b> EDEBUG-IT)	Evaluate the function from this sexp.	
<u>Debug - step in</u>	хj	(lispy-debug-step-in)	<ul> <li>Evaluate the arguments at the current function's call</li> <li>Jump to the function's definition</li> <li>Set the result of evaluation to the function's arguments</li> </ul>	
EDebug stop	z	(special-lispy-edebug- stop)	Does the same as q in edebug, except current function's arguments will be saved to their current values.  This allows to continue debugging with lispy-eval (e) from edebug's current context.  The advantage is that you can edit the code as you debug, as edebug puts your code in read-only mode.	
ERT test support	More information abo	out the Emacs Lisp Regres	sion Testing system in <u># ERT</u>	
Execute Tests: run ert	хT	(lispy-ert)	Call ('ert' t): run all ERT tests.	
View test at point	xt	(lispy-view-test)	View better the test at point.	
Outline operations	Also see <b>C-a</b> above	which moves to beginning	of line and reveals outlines.	
Insert a new heading	M-RET	(lispy-meta-return)	Insert a new line followed by a comment for a new heading. Something that starts with: ;;*  Infortunately, by default, this key is active all the time, even when not using Lispy inside org-mode. This conflicts with PEL's global binding for this key.  PEL provides the pel-enable-lispy-meta-return user option, set off (nil) by default, which disables this key. If you want to use it, set this user-option to on (t).	
Toggles on off org-mode- like outline	I	(special-lispy-shifttab ARG)	Toggles on/off an org-mode-like outline.  • To make this work, lispy-mode will modify outline-regexp and outline-level-function for the current buffer while it's on.	
Indent / hide/show outline	i	(special-lispy-tab)	If in outline: hide/show outline, otherwise indent all code of current paren  • When region is active, call 'lispy-mark-car'.	
Next outline level	J	(special-lispy-outline- next ARG	Takes a numeric prefix arg and calls outline-next-visible-heading arg times or until past the last outline-regexp.	
Previous outline level	К	(special-lispy-outline- prev ARG)	Takes a numeric prefix arg and calls outline-previous-visible-heading arg times or until past the first outline-regexp.	
Ediff Operations See: <u>Notiff &amp; Merge</u>	<ul> <li>Use the xB command to identify one S-expression or region.</li> <li>Then use the B command to select another S-expression or region and open an Ediff session comparing these 2 sections of code.</li> <li>You can use the Ediff features to copy code from one section to the other, etc</li> </ul>			
Store current buffer and region for further operation	• xB • x?B • x C-h B	(lispy-store-region- and-buffer)	Select S-expression or region, the side A of a diff session started by executing the command <b>B</b> below.	
Ediff regions  ★★	В	(special-lispy-ediff- regions)	Select the S-expression or region, the side B of an Ediff session and start that Ediff session.  Comparable to 'ediff-regions-linewise'.  First region and buffer come from 'lispy-store-region-and-buffer'  Second region and buffer are the current ones.	
<b>Buffer operations</b>				
Save buffer	xs	(save-buffer &optional ARG)	Save current buffer in visited file if modified. Same as C-x C-s	
Visit another file	v	(special-lispy-visit ARG)	Visit another file within this project using <u>projectile</u> or <u>find-file-in-project</u> .  • Use <b>v</b> to open the file in the current window.  Use <b>v</b> to open the file in another window.	
See: <u><b>∑</b> Projectile</u>	• <b>W</b> PEL support	t-method to select what for ts both of these external p	· ·	
Others	donvaro caon one.	S.11000 you are farmlar w	e project. you may mile <u>projectine</u> more addid and hades.	
Perform cleanup	хC	(lispy-cleanup)	Perform cleanup. Remove all comments in buffer after current point position that start with ;; =>	
Execute specified	• x C-h	(lispy-x-more-	A Hydra that provides access to several other commands accessible with the following blue letters.	
command	• x?	verbosity)	bnd : Bind variable cnd : lispy-to-cond def : lispy-to-defun ede : Execute edebug-defun fla : help : lispy-describe: Open help buffer on the specified function symbol if : lispy-to-ifs jmp : blk : lmb : mul : rep : sav : unb : vt : Bnd : lispy-store-region-and-buffer Rev : lispy-reverse erT : Run ERT test.	

<u>Description</u>	Key	Function	<u>Note</u>
<b>Python Support</b>	The following commands are only available for spy, lispy for Python, in a Python source code file.		
Set Python Process	жр	(lispy-set-python- process)	
Change current directory	xn	(lispy-cd)	Change the current Python REPL working directory.