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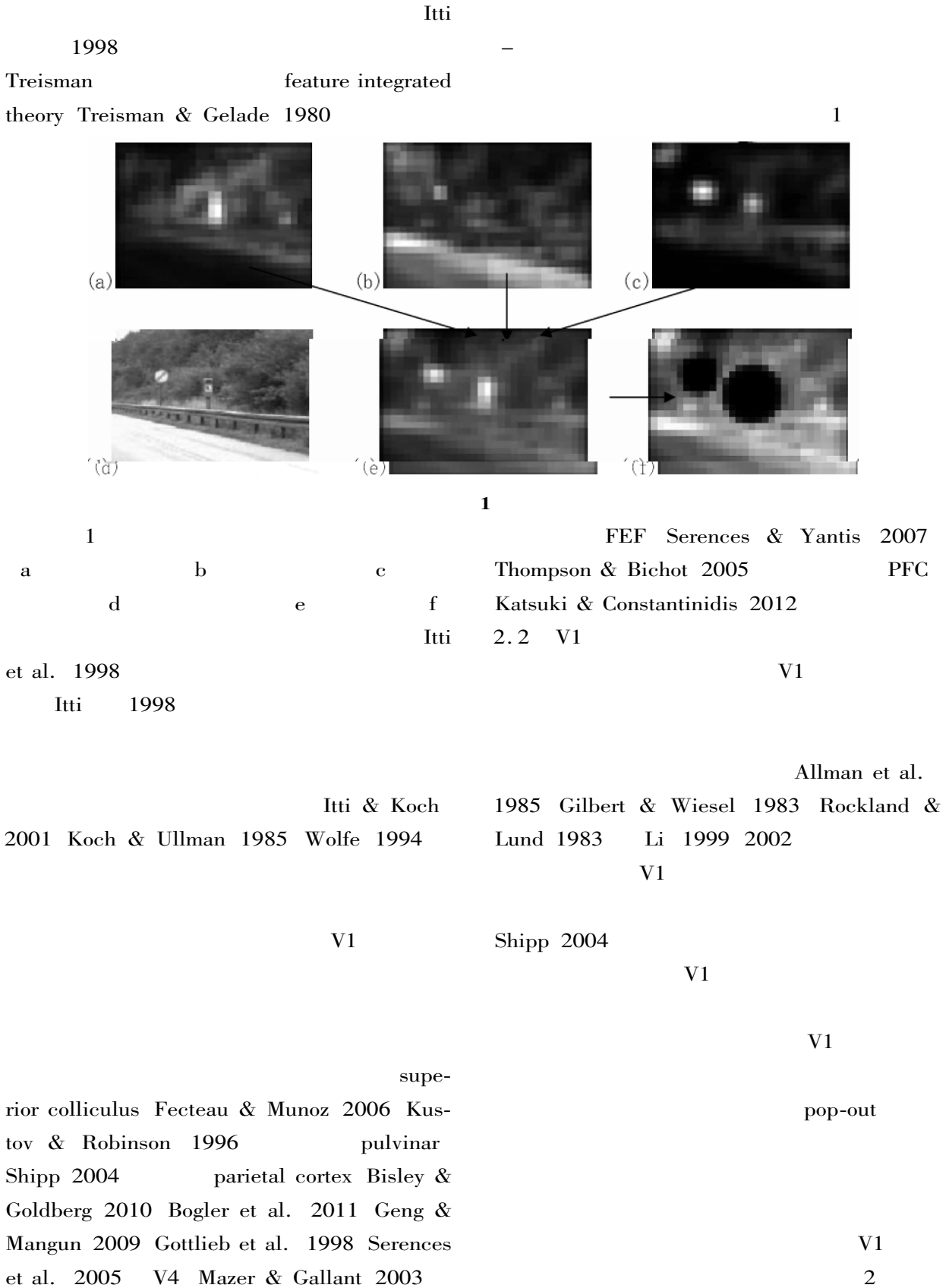
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stimulus-driven mechanism		ency	
	bottom-up attention		Niebur & Koch 1998 Olshausen et al.
	transient attention		1993 Tsotsos et al. 1995 Koch Ullman
	exogenous attention		1985
			Treisman
	frontal eye	master map	Treisman 1988
field FEF	dorsomedial pre-		
frontal cortex DMPFC	later		
prefrontal cortex LPFC	ante-		
rior cingulate cortex ACC	posterior		
parietal cortex PPC	intraparietal		Itti 1998
sulcus IPS –	fronto-		
parietal attentional network	de-	1	
fault network Baluch & Itti 2011 Botvinick			9
et al. 2001 Bush et al. 2000 Kastner &			
Ungereider 2000 Noudoost et al. 2010 Ser-			
ences & Yantis 2006 Swisher et al. 2007			
Zhang et al. 2016			– centre-sur-
			round differencing
	Jonides 1981 Nakayama &		
Mackeben 1989 William James		–	c
		c – 1	c – 1
		12	6
			Gabor
		24	42
			winner-take-all
2.1			inhibition of re-
		turn	Klein 2000
	salient		
		sali-	

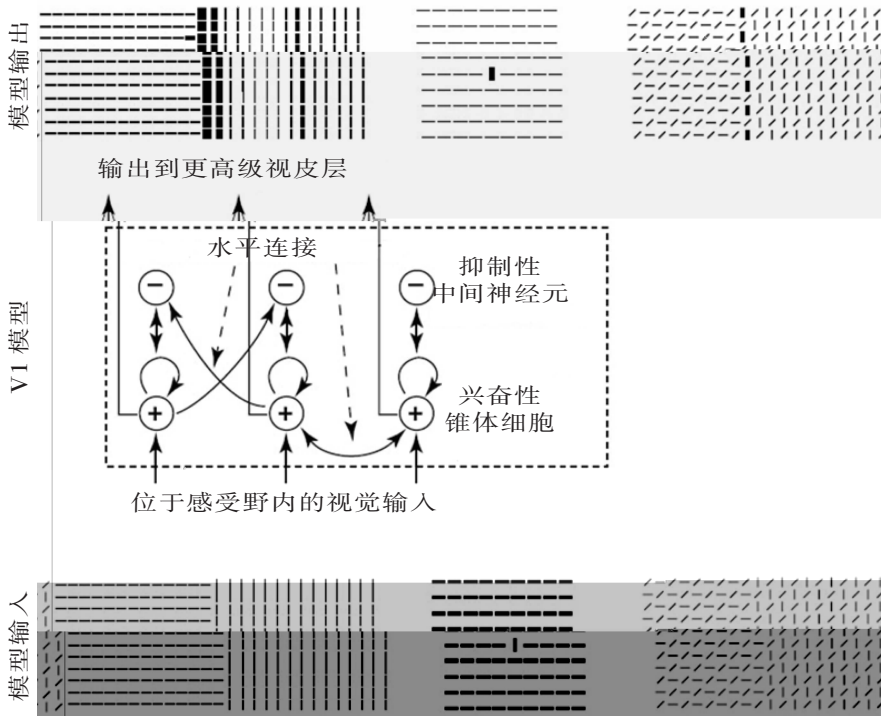


V1

V1

Hegd  & Felle-

man 2003



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2 V1

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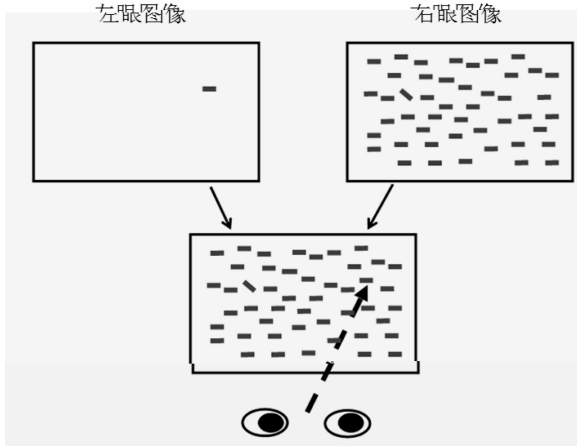
Li 2002

V1

Koene & Zhaoping 2007 Zhaoping & May
2007 Zhao
ping 2008

V1 V1
Palmer 1999

V1
Wolfe Franzel 1988



3

Zhaoping 2008

2.3

V4

Schiller & Lee 1991

V4

Burrows & Moore

Itti et al.

1998

V1

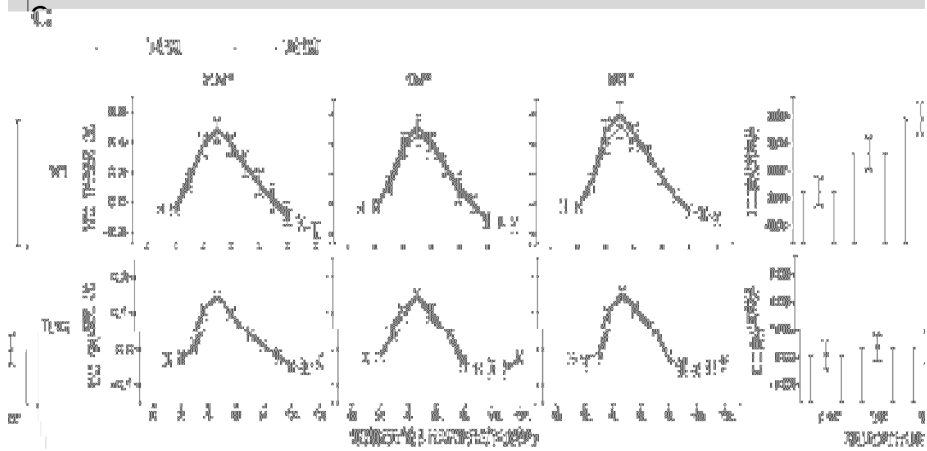
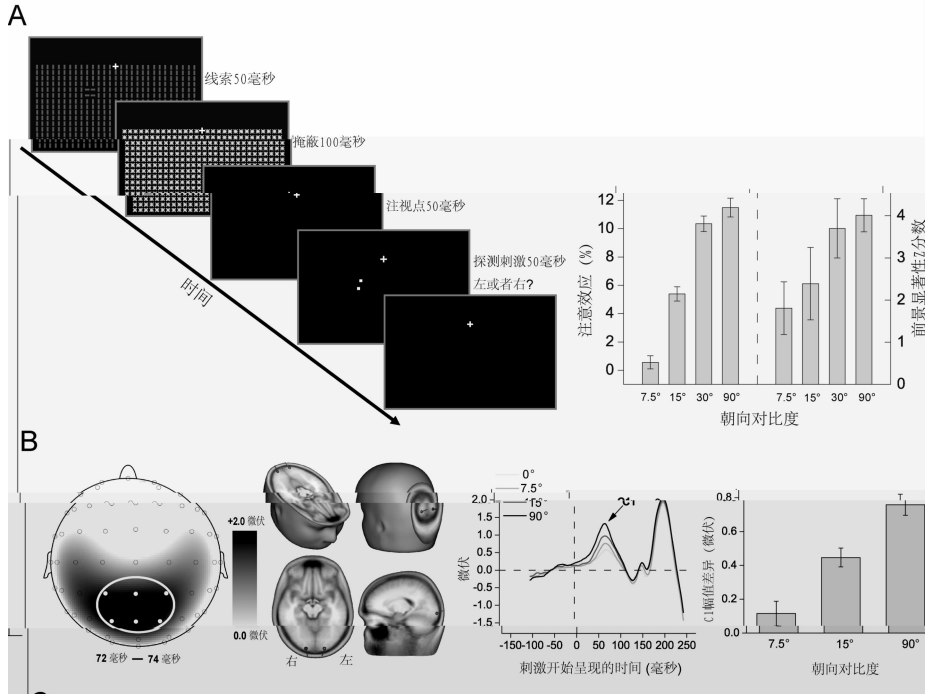
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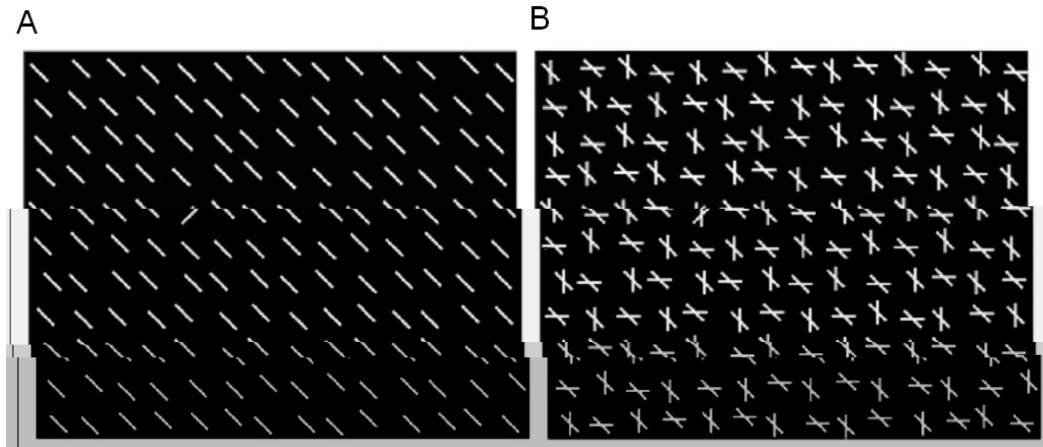
Li 1999 2002

Bisley et al.

4B C1 V1
 V1 Clark et
 al. 1995 Martinez et al. 1999
 V1 Li V1 V1
 Chen 2012 2016 1999 2002



4 V1



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Zhaoping & Guyader 2007

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Neural Mechanisms of Bottom-up Attention

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Abstract

The stimulus-driven contribution to the allocation of attention is bottom-up attention. Investigating its neural mechanisms leads to a better understanding of how the brain creates consciousness. Although bottom-up selection is typically quick and potent there are controversies concerning the brain regions involved. Two models with their respective evidence a-

bout bottom-up attention over the past decades were reviewed the saliency-based attention and primary visual cortex V1 saliency map models. Issues for future studies were further discussed.

Key words attention bottom-up attention saliency map brain imaging primary visual cortex V1