ANN ELIAS

Obliteration
The camouflaged body, Australia, and photography in modern war

Figure 1, Max Dupain, Camouflaged plane, Bankstown, c.1942, National Archives of Australia C1905
Introduction

Camouflage in the twenty-first century refers to military patterns and fashion, animal behaviours and colours, but also social processes that utilize hiding and dazzling, as well as concealment and deception. An early use of the word in Australia, and the related term ‘camoufleurs’—referring to those who deploy camouflage—was in 1921 in *The Australian Museum Magazine* where zoologist Frank A. McNeill published an article titled ‘Crustacean Camoufleurs’. McNeill explained how the term ‘camouflage’ had only recently come into use in natural history and had originated on the battlefields of the First World War (WWI). Camouflage was adopted in war, he said, ‘for the protective colouring, screening, and covering of vital objects both in attack and defence’. The rest of his article described through photographs how these processes were also put into practice by crabs in their natural habitats of sand and rock. The aim of my paper is to discuss camouflage in relation to photography and in doing so expand the discussion beyond the familiar contexts of war and nature into the area of modernism but without losing the all important point that camouflage is interdisciplinary—it is difficult to disentangle science and nature from war, society and art.

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My paper discusses photography for the period 1914—1945 and I use Max Dupain (1911-1992) as a case study since he was deployed in the Second World War (WWII) to empower the camouflaged body yet at the same time was a leader in modernist photography. Consequently I need to address two things. First, war photographs intended to aid the function of war, photographs like Figure 1 taken to demonstrate the effectiveness of camouflagne nets to make the detection of bodies and objects as difficult as possible. Second, modernist photographs taken
before WWII such as Figure 2, images intended as art and for art audiences, but where the idea is also to make it difficult for the viewer to read bodies, human or otherwise, with clarity. In the example of *Photo synthesis* similar visual strategies to war camouflage are put into practice: one is the merging of two distinct forms and realities into one, and another is the use of montage to create a screen of invisibility similar to a camouflage net. Further, it was a modernist project to undo the connection between photography and the real by using constructivist techniques like montage and defamiliarisation to produce new realities. But this was also a military strategy. In short, the essence of my argument presented in this paper is that modernist photography and wartime camouflage were mutually informing.

**The nature of camouflage**

The goal of camouflage is the non-detection and non-recognition of bodies and objects. This is achieved either through crypsis—the process of blending with a background through methods including countershading and disruptive patterning—or mimicry which allows an object to stand out but in disguise. There are many theories explaining how the illusions of camouflage work but Roy Behrens argues for the importance of gestalt theory. The success of camouflage, he argues, is an outcome of confounding the figure-ground relationship which gestalt theory claims is the basis of human perception and the recognition of objects. According to gestalt theory the defamiliarising techniques of camouflage create a problem for perception because they keep the brain’s organization of sense data in flux. László Moholy-Nagy, for example, a major figure in avant-garde photography—but also in camouflage design—constructed abstract images of light and space, even when photographing real places. In the case of ‘Berlin radio tower’, 1928, by getting high above his subject he was able to interfere with naturalistic perception and trap the eye in a world of uncertainty.

The results of disrupting figure/ground relations through camouflage are astonishing: forms dissolve into space, objects morph, and bodies hide in full view. Identities become fluid when the visual interplay of form and space keeps shifting and when entities blend with their environments. In the twenty-first century artists including Liu Bolin have learnt the art of camouflage, and of obliteration. Bolin is famous for making himself disappear by using paint and then having himself photographed as evidence of his obliteration. Bolin’s work, however, not only has a

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3 These terms are given useful context in Martin Stevens and Sami Merilaita (eds), *Animal Camouflage: Mechanisms and Function*, Cambridge, Cambridge University Press, 2011

precedent in military camouflage but also in the impact of military camouflage on other artists, especially the artist Veruschka. This once famous model got tired of being looked at. Through camouflage she found she could prevent the ‘trap’ of the public gaze.\(^5\) Using her long acquired knowledge of photography, of what it means to be photographed, and of surveillance, she chose to make her body disappear into whatever material environment her aesthetic dictated, including wood, stone, water, and feathers. She disappeared into many different inanimate worlds in what Susan Sontag called a ‘mimicry of death’.\(^6\)

**In Australia**

Bolin and Veruschka are two examples of post-WWII artists whose work is about camouflage, and how camouflage looks when it is photographed. I now want to turn to Sydney, Australia, in 1939 when Max Dupain also brought photography and camouflage together. In that year Sydney Ure Smith, publisher of *Art in Australia* and *The Home* journals, met with a group of artists including painters, photographers, architects and designers and formed ‘the camouflage movement’. Among the group was Dupain who fast gained a reputation as one of the group’s most versatile and valuable camoufleurs. The reason for this was the nature of modern war itself: the war landscape was a photographically mediated environment and war culture primarily oriented to aerial photography. Under the supervision of a zoologist, William Dakin, Dupain worked with fellow-artists Frank Hinder, Douglas Annand, and Adrian Feint in a workshop supplied by the Australian Army.\(^8\) But he was also stationed at Bankstown airport and later sent to Papua New Guinea for aerial reconnaissance. Aerial warfare had created a new consciousness of the body and Dupain’s job was to devise methods of camouflage to counteract surveillance technologies.

**Obliterative colouration**

Dupain spent many hours surveying Australia and Papua New Guinea by air to see as the enemy would see, and to know what measures to take on the ground to obliterare from view military objects and locations. Many of the design methods for camouflage in the field were based on earlier experiments by British zoologist

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8 W. J. Dakin, ‘Special Camouflage Methods at Bankstown Aerodrome and Laverton’ in William J. Dakin, *Camouflage Report 1939-1945 (with appendices A to D)*, Canberra, Australian War Memorial, AWM 81 [77 part 1], 1947, p.75.
Hugh B. Cott (1900-1987) and United States artist and naturalist Abbott H. Thayer (1849-1921). Thayer was a generation older than Cott and began a career in the nineteenth century publishing detailed accounts of how animals go unnoticed in their surroundings. It was Thayer who coined the term ‘obliterative colouration,’ one of the cornerstones of camouflage aesthetics still important in biological science and military science today. The concept ‘obliterative colouration’ refers to the way colours interact with light on animal skins so that in the right conditions bodies can seemingly disappear from view even when seen at relatively close range—as long as the body is still. Thayer’s theory proposed that dark colours on the topsides of animals and light on the undersides distribute light and shade in such a way that in certain light conditions an animal’s body will cease looking like a solid object and become almost transparent.

Thayer was excited about the application of this principle to warfare and the advantages in being able to control presence and absence, visibility and invisibility. He campaigned his government to introduce camouflage warfare. However, the idea of obliterating a human subject from view by applying the principles of animal camouflage met with opposition in both WWI and WWII. Conservative military personnel found it unmanly for soldiers to disappear when traditional ideas of manliness in war involved standing out.

Obliteration in modern art
Blend in or stand out? The point of war camouflage was to blend form into background. Aesthetically, it was similar to the principle of abstraction namely the radical reduction of ground/figure distinctions. Similar too was the controversy surrounding the way the new camouflage warfare went against good tradition and the objection raised by conservative art critics to abstraction, especially by critics in the realist school. In the traditional military world camouflage was seen negatively as the will to hide and as a form of cowardly feminine weakness. Similarly, in the Australian art world at the time of the Second World War, abstraction and modernism were considered by traditionalists like Lionel Lindsay to be symptomatic of weakness and confusion. Clarity of form through classical

9 Thayer published Concealing Coloration in the Animal Kingdom in 1909, and Cott published Adaptive Coloration in Animals in 1940.
10 Motion was a problem for camouflage that neither Wars was able to solve.
12 This was the case in WWI and WWII but in the Vietnam war camouflage became hyper-masculinised as warfare developed a mythology of the primitive, dangerous jungle warrior.
13 Lionel Lindsay, Addled Art, Sydney, Angus and Robertson, 1942.
drawing was paramount. The point to make here is that camouflage aesthetics and modernist aesthetics both aimed at obliteration of form, and further that the conservative reaction to both was equally as vehement because at stake was the loss, through an aesthetics of dispersal, of the centred human subject.

**Camouflage and space**

A main principle with camouflage is making form subordinate to space. That is why photography and camouflage have a symbiotic relationship: photography is the evidence that verifies that the body has disappeared, even in full view. Dupain’s aim was to achieve the perceptual eradication of personnel and hardware from enemy view and in addition to recognize and diffuse any attempts at camouflage by the enemy. He was sent for training with the Royal Australian Airforce and there he learnt new skills with aerial photography. The centrality of photography to war culture meant it was imperative to seize control of the potentially deadly gaze of the camera. It involved developing deep understanding of the aerial viewpoint. The aerial perspective, where objects lose their identity from high up, brought a new objectivity to Dupain’s photography one based in emotional detachment and the obliteration of a human-centred viewpoint (Fig. 3).
But with camouflage Dupain did not find himself working in a field where he had little or no prior knowledge. On the contrary, once seconded to war work he brought the practice and theory of modernism, especially abstraction and surrealism, to the concealment of soldiers, planes and war hardware. He was part of an international movement of modern artists, also working in camouflage in the United States, Britain and Europe between 1939 and 1945, including Moholy-Nagy. Unique light and space modulations were integral to Moholy-Nagy’s practice before the war, and as in the case of Dupain, his potential for camouflage work did not go unnoticed during official organization of the war effort. ⁴ Max Dupain and László Moholy-Nagy both had a camouflage way of thinking. This is explained by Hanna

Shell as a state of mind or consciousness that enables ‘the strategic manipulation of one’s immediate environment for purposes of self-effacement’.¹⁵

**The avant-garde and camouflage**

As previously stated, modern developments in military camouflage took place concurrently with developments in modernism and Gertrude Stein confirmed this when she claimed that disrupted camouflage patterns were appropriated for warfare from Picasso and cubism.¹⁶ Not just photography but painting also shared ideas in common with the aesthetics of disappearance in military contexts. The dissolution of form achieved through cubism seemed to have a direct relevance for making the forms of war objects and personnel also disappear. In the United States modern artists, including Ellsworth Kelly and Arshile Gorky, were also obliged to perform war duties and chose camouflage. Gorky wrote a camouflage civil defence manifesto for New York city and urged citizens to ‘paralyze’ the enemy’s vision.¹⁷ Other members of the avantgarde were simply bewitched by the very subject of invisibility especially surrealists who recognized in the aesthetics of war the aesthetics of surrealism and most notably in the effects of doubling and metamorphosis. The very idea of a human body metamorphosing into something else for military gain, and mimicking the camouflage behaviors and appearances of animals, excited the surrealists who were vitally interested in Darwin’s theory of man as an animal.

Salvador Dalí did not contribute directly to war work but in 1942 when living as a refugee from war in America, he published an article on camouflage in *Esquire* magazine.¹⁸ He found a striking similarity between surrealist strategies of visual doubling and mimicry in nature, the shifting imagery of camouflage in war, and his own paranoiac and displaced images. Just as Dalí had referred to surrealism as the ‘systemization of confusion,’ so it occurred to him that this was an apt description of camouflage in wartime.¹⁹

And not only Dalí but other surrealist writers and artists were entranced by the question that if stick and leaf insects can live their lives undetected by human eyes,

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what other beings, perhaps monsters, lurk invisible in the phenomenal world? Just because something can’t be seen doesn’t mean it isn’t there: it was a fundamental lesson learnt in camouflage school. But even before WWII Max Dupain had explored the same idea by utilising double exposures (Fig.2). By layering one image on another he could achieve the effect of bodies and landscape morphing together and of forms becoming open and dispersed rather than solid and closed. It was a surrealist language he took to war.

The movement of surrealism was fascinated in and knowledgeable about animal camouflage. This is one reason why surrealism and military camouflage share common histories. Among the many examples that can be cited to illustrate the impact of camouflage on surrealism in interwar years is Man Ray’s work where he explores the human body in states of becoming animal. In particular his films and photographs of Lee Miller utilized patterns of light in suggestive and inventive ways. For example, in *Return to Reason* (1923) Miller’s body is transformed by tiger patterns created by light shining through a mesh curtain. The idea of becoming animal is also well illustrated in surrealism by the work of Jacques-André Boiffard. His photographs of big toes blur the boundary between human and animal; a strange and unsettling doubling takes place and it is difficult for the viewer to read the body with certainty. A third example is the surrealist journal *Minotaure* where humans and animals were constantly juxtaposed and where Roger Caillois first published ‘Mimicry and Legendary Psychasthenia’ (1935), a classic camouflage text but one comparing human and insect mimicry. Caillois argued that resolving distinctions between an organism and its background, and between the real and the imaginary, are life’s ‘ultimate problem’. Caillois also said that the will of an organism to fuse with its background and lose distinction in space is a will to depersonalisation. And many others have reached the same conclusion including D.W. Winnicott who claimed that when figure merges into ground through mimicry or cryptpsis it ‘expresses the ego’s desire to dissolve itself into a more generalized type of being’. Loss of ego, loss of self, abstraction from the object, the succumbing of form to space: these are all elements of modernist photography but they are also principles that were observed in the behaviours of animals, and in addition they were principles integral to military camouflage.

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20 See John B. L Goodwin, ‘Remarks on the Polymorphic Image’, View, 1, Dec-Jan 1941-1942, pp.8-9
Biology and Military science in avant-garde art
After WWI a common technique used in modernist photography to achieve the effect of bodies merging with space was the dramatic utilization of stripes of light and shade. It is very similar to the patterning deployed by ship camoufleurs and known as ‘dazzle’. But ship camouflage was in turn modeled on animal patterns especially zebras and tigers.

Fig. 4, A Moorish Idol (Zanclus cornutus) in William Dakin, The Art of Camouflage, 1941, pp. 13-16
Fig. 5, Harold Cazneaux, *Pergola Pattern*, gelatin silver photograph, 1931, Art Gallery of New South Wales, gift of Cazneaux family 172.1975
Dazzle patterns are disruptive patterns; they interfere with the contours of form and give the impression of fragmentation rather than wholeness. The effect is evident in a photograph of a Moorish Idol fish (fig. 4) published in a book titled *The Art of Camouflage* (1941), a handbook for the Australian military that Max Dupain helped compile. That Dupain was familiar with animal camouflage methods is certain. That he applied animal camouflage to military camouflage is also certain: at some point in their training every camouflage officer in Australia in WWII learnt about animal camouflage. But Dupain was probably exposed to dazzle patterns as a boy aged between four and seven years over the course of WWI. Dazzle-painted ships were docked in Sydney harbor during the war, and they were a sight that many did not forget because in WWI the boldest stripes imaginable were applied to ships to confuse the enemy about shape, direction, speed, even the location of front, side and back.24

Australian and European photography practiced between the Wars reveals a preoccupation with disruptive patterns of light on bodies. An excellent example is *Pergola Pattern* (1931) by Harold Cazneaux (Fig. 5). The effect of stripes of light and shade falling across the body of the girl flattens her form, but also dissects it and the result is a representation both dispersed and fragmented. And because the pattern is like zebra or lemur stripes her body transforms into something non-human and seemingly primitive, as if the divide between human and animal has been crossed.25

A European example that compares well with Cazneaux is *Woman with a Leica*, 1934 by Aleksandr Rodchenko. The unifying effect of patterning makes the human subject seem immersed in the world and at one with her environment rather than distinct. With the pattern of the inanimate urban world doubled as a pattern too of the human body oppositions of subject and object are reduced significantly. And with more emphasis placed on continuity rather than distinction, and with form in tune space, Rodchenko’s photograph shares much in common with camouflage in war. Both Cazneaux and Rodchenko have a direct aesthetic connection with the dazzle patterns on WWI ships, and through dazzle with the disruptive patterns on animals including zebras.

However, the disruptive patterns in Cazneaux’s and Rodchenko’s photograph are geometric—the effect of dispersal of form can also be achieved with organic

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25 A second spectacular example is by the surrealist photographer Dora Maar who could not help to have been reminded of the dazzle ships of WWI, or the patterns of animals, or primitivistic markings on skin, when she printed up her work *Paul and Nusch Eluard* at Mougins in 1937.
shadows. And in both World Wars the device responsible for obliterating the body using disruptive patterning and organic shadow was camouflage nets (fig. 6).

How influential the aesthetics of camouflage nets was on interwar avant-garde photography is anyone’s guess. But to date the analogies have not been forthcoming from photography historians. Yet if we look at Dupain’s *Spontaneous composition* (fig. 7), dated 1935, it could be argued that it anticipates the experiments with camouflage nets he was destined to undertake in WWII and seen in Figure 1. Using shadows he has dispersed forms across the picture surface and made it slower for the eye to work out what it is looking at. What we can take from this comparison is that modern art, especially formalism, and camouflage aesthetics, were mutually informing.
Camouflage and netting
I have been emphasizing the cross-referencing of biology, military science, and avant-garde photography in interwar years as well as wartime. I have argued the impact of war aesthetics on avant-garde photography is a subject that to date has not been looked at closely but is deserving of greater attention. Yet there are direct examples of the impact of the military and camouflage on modernist photography. An example is a photograph by David Scherman of Lee Miller taken in 1940. On one hand it shows the extent to which military culture had naturalized itself in civil society during WWII and how close the gap between military and civilian domains had become in the field of art.
Miller is wrapped in a military camouflage net complete with garnishes of fake vegetation. Her body is covered in camouflage paint to make her less conspicuously white and more shadowed.\(^{26}\) It is pretty obvious that the intended effect is not concealment in the military sense but exposure, with just a hint of concealment. In fact the camouflage net fetishizes her body and seems to suggest that her femininity is doubly deceptive. Nevertheless the netting she wears symbolises war even in the context of a photograph about beauty; it is impossible to ignore its relevance to soldiers, fighting and political conflict. Significantly, Miller was married to artist Roland Penrose at the time and Penrose was a camouflage instructor for the British Home Guard; the netting is a personal reference. Like Max Dupain Penrose was seconded to war work and found important synergies between art and camouflage but unlike Dupain he focused on civilian concealment.

There is no record of Dupain using camouflage netting during WWII to photograph nudes. But before WWII he certainly showed an interest in the effects of netting or mesh on the naked female form. One pre-War example is *Jean with Wire Mesh (eyes open)*, a photograph taken either in 1936 or 1937 (fig. 8). Patterns and shadows cast by netting on the model's skin create a degree of spatial confusion in the sense that without them her body would have more clarity. But like Scherman's photograph of Lee Miller, Dupain was interested in the dynamics of concealment and exposure for sensual effect. The shadows create mystery, or as the surrealist, René Magritte, put it in relation to the aesthetics of camouflage, the desire to know what lies behind appearances because 'each thing we see hides another [and] we always want to see what is being hidden by what we see'.\(^{27}\)

\(^{26}\) An image of this work is reproduced in David Wilkinson, *Nature*, no. 447, 10 May 2007, p. 148

Fig. 8, Jean with Wire Mesh (eyes open) gelatin silver photograph image 50.8 h x 40.6 w cm
Accession No: NGA 2006.1064
Pattern prone
As the photograph Jean with wire mesh shows is that what Dupain knew about art he applied to camouflage and what he learnt about camouflage he applied to art. Misinformation, distortions, manipulations were common to both his pre-war and post-war work. When WWII descended 'netting became a visual and material medium of immersion in nature at the same time that it offered resistance to the photographic image'. That is why, in preparation for enemy reconnaissance and attack by air, Dupain was deployed at Bankstown to test the dispersal of light on the ground through the patterns made by camouflage nets and to obliterate from view the military world beneath (Fig.1).

Looking back on his career from the vantage of 1988 Max Dupain admitted that in the 1940s he was 'pattern prone'. But it was not just the war that made him this way. As we have seen in the example of ‘Spontaneous composition’ Dupain was pattern prone in the 1930s before becoming a camouflage officer. In addition his interest in creating perceptual confusion and doubt, which was so valuable to the war effort, is apparent earlier such as in the peacetime portrait of musician Edmund Kurtz (Fig. 9) (1936). In this work the connections with camouflage are many: the image confuses a logical reading of things; it distorts and denatures the sitter; it is an attempt to dissolve facts in favour of figure and ground merging; the act of erasure is important. In sum, Dupain turns the cellist Kurtz into a solarized pattern and in this aesthetic the man’s features disappear into surface, a dynamic that makes the image all the more emphatic and compelling. However, realism and resemblance to the person has been significantly reduced to make the features of the face disappear into patterns of light and shadow.

29 Max Dupain, Max Dupain’s Australian Landscapes, Ringwood, Victoria, Viking, 1988, p. 115
Fig. 9, Max Dupain, *Edmund Kurtz*, 1936, gelatin silver photograph, 18.6 x 13.5cm, Art Gallery of New South Wales, 113.1976
Conclusion

For the artists and photographers, like Dupain, who worked for The Department of Home Security in WWII their ultimate goal was finding the perfect pattern for soldiers’ uniforms, ones that matched background vegetation and obliterated the body from view. But not until the Vietnam War was this idea realised; in WWII soldiers continued to wear the single colours of green and khaki. But as a result of the rapid expansion of military camouflage patterns since the 1960s, popular culture too has become camouflage minded. These days everyone loves camouflage, according to Michael Taussig in 2008: dazzling by standing out and disappearing by blending in, and conversely disappearing by standing out and standing out by blending in go, he said, ‘to the heart of life’.30 Certainly the subject of military camouflage is an ever-expanding body of literature. But there is a lot more work to be done on connections between modernism and wartime camouflage. Perhaps it has been overlooked because the involvement of artists including Dupain in WWII sits ambiguously and uncomfortably between the history of violence and the history of aesthetics.

John Adkins Richardson, writing in WWI, explained camouflage as the creation of ‘an uncanny sort of space on which the viewer can never put his finger or rest his mind’.31 This may also explain why camouflage and modern art have so much in common. The objective of wartime camouflage is the visual obliteration of form while in full view, or at the very least total doubt about the visual encounter. And in many ways visual doubt as well as psychological doubt was also the aim of modern art. In part that is why in Max Jacob’s defence of modern art he said: ‘Doubt, that is art’.32 In the desire to create perceptual confusion and doubt modern art shared much in common with modern war camouflage, and, for that matter, the lives of animals too.

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ANN ELIAS is Associate Professor at Sydney College of the Arts, the University of Sydney. Books include Useless Beauty: Flowers and Australian Art (Cambridge Scholars Publishing, 2015), and Camouflage Australia: art, nature, science and war (Sydney University Press, 2011). Edited books include A. Elias, R. Harley and N. Tsoutas (eds) Camouflage Cultures: Beyond the art of disappearance (Sydney University Press, 2015). Journal articles on camouflage, flowers, and underwater space are found in Papers of Surrealism, Leonardo, 19th Century Art Worldwide, and Antennae.