

BOMB NOW, DIE LATER

**WAS THE BOMBING CAMPAIGN UNDERTAKEN BY
THE UN COALITION AGAINST IRAQ, IN 1991, FOUGHT
ACCORDING TO JUST WAR CONVENTIONS?**

-

Ruth Blakeley

2001

REVISED FEBRUARY 2003

University of Bristol
Department of Politics

Abstract

The air campaign undertaken by the United Nations coalition against Iraq, during the Gulf War of 1991, resulted in the devastation of many vital components of the Iraqi infrastructure. The effects of this destruction have been compounded by the economic sanctions imposed upon Iraq before, during and since the Gulf War, and have contributed to the extensive violation of the rights of the civilian population of Iraq. This study demonstrates that it is the combination of the persistent defiance of Saddam Hussein and the continuing imposition of economic sanctions, rather than the *Desert Storm* air campaign, that is responsible for the destruction of the infrastructure of Iraq, and the consequent suffering of a nation. The actions of the air campaign planners are measured against the requirements of principles drawn from Just War doctrine, in order to demonstrate the degree to which the air campaign planners respected the immunity of Iraqi non-combatants.

Contents

ABSTRACT	1
-	
CONTENTS	2
-	
TABLES AND ABBREVIATIONS	3
-	
INTRODUCTION	6
-	
CHAPTER I CRITERIA FOR ASSESSING OPERATION <i>DESERT STORM</i>	9
Introduction	9
The <i>Jus in Bello</i> principles	9
Jus in Bello principles and the air campaign	12
Conclusion	13
-	
CHAPTER II ASSESSING THE INTENTIONS OF THE AIR CAMPAIGN PLANNERS	14
Establishing suitable criteria for assessing the intentions of the air campaign planners	14
First Criterion: The evil effect must not be one of the actor's intentions	14
Second Criterion: The actor's intention must be to aim narrowly at the acceptable effect	15
Third Criterion: The evil effect must not be a means to the actor's ends	22
Fourth Criterion: Actors must seek to minimize the evil effect, accepting risks to their own lives	23
Conclusion: Not direct targets, but direct victims	24
-	
CHAPTER III DOUBLE EFFECT AND PROPORTIONALITY IN OPERATION <i>DESERT STORM</i>	26
Introduction	26
What was intended by attacking electric power?	27
How is the widespread damage to electric power justified by the US Air Force Coalition?	27
Was the long-term damage to the Iraqi infrastructure an unintended double effect of the other targeting objectives?	29
Was the damage to the Iraqi power supply, and its consequent effects, proportional to the achieved objective?	29
Conclusion	31
-	
CONCLUSION AND RECOMMENDATIONS	32
-	
BIBLIOGRAPHY	35

Tables and Abbreviations

Table 1: Strategic Target Sets in the Gulf War, p.15

CASI Campaign Against Sanctions on Iraq

DIA Defence Intelligence Agency

GWAPS Gulf War Air Power Surveys

IWTV Iraq Water Treatment Vulnerabilities

UN United Nations

UNICEF United Nations Children's Fund

UNOIP United Nations Office of the Iraq Programme

USAF United States Air Force

WFP World Food Programme

WHO World Health Organisation

Introduction

The Gulf War began with the Iraqi invasion of Kuwait on 2 August 1990. The United Nations set a deadline, 15 January 1991, by which date Iraqi troops were to have withdrawn completely from Kuwait. Iraq did not withdraw, so an allied coalition, led by the US, and comprising troops from other UN Security Council states, launched the *Desert Storm* air campaign on 16 January 1991, to rid Kuwait of Iraqi invaders. Following a ground offensive as well, between 24 and 27 February, Iraqi military leaders finally agreed to a permanent cease-fire on 3 March 1991.^{1[1]}

After the Gulf War, the UN dispatched a mission to the Gulf to assess the humanitarian needs of the region. This mission was headed by Under-Secretary-General Martti Ahtisaari, and took place in March 1991.^{2[2]} The mission reported:

Nothing that we had seen or read had quite prepared us for the particular form of devastation which has now befallen the country. The recent conflict has wrought near-apocalyptic results upon the economic mechanised society. Now, most means of modern life support have been destroyed or rendered tenuous. Iraq has, for some time to come, been relegated to a pre-industrial age, but with all the disabilities of post-industrial dependency on an intensive use of energy and technology.^{3[3]}

This indicates the severity of the effects of the war upon Iraq. A later UN report, compiled at the request of the president of the UN Security Council in 1999, outlines the humanitarian situation in Iraq eight years on, suggesting that much of the damage that Ahtisaari discovered immediately after the war had not yet been repaired.^{4[4]} It states that the maternal mortality rate increased from 50 per 100,000 live births in 1989 to 117 in 1997. The under-five child mortality rate increased from 30.2 per 1,000 live births to 97.2 during the same period.^{5[5]} It adds that, “Malnutrition problems also seem to stem from the massive deterioration in basic infrastructure, in particular in the water-supply and waste disposal systems. The most vulnerable groups have been the hardest hit, especially children”.^{6[6]}

From these reports I have caught a glimpse of the immediate and longer-term effects of the Gulf War upon the Iraqis. It is clear that the degree of devastation of the infrastructure was extensive. Thomas Nagy goes as far as suggesting that the damage to the water supply in particular, is indicative of an intent on the part of the US to deliberately damage the water

^{1[1]} J. Nye and R. Smith. *After the Storm. Lessons from the Gulf War*. (London: Madison Books, 1992), pp.301, 334 and 343.

^{2[2]} J. Perez de Cuellar. *Report S/22366 to the United Nations Security Council*, detailing the findings of the mission undertaken by Under-Secretary-General Martti Ahtisaari to assess the humanitarian needs arising in Iraq in the aftermath of the Gulf War. (New York: UN Office of the Iraq Programme - OIP, 20 March 1991) <<http://www.un.org/depts/oip/reports>>

^{3[3]} *ibid.* Part 8.

^{4[4]} United Nations Report. *Annex II of S/1999/356*. “Report of the Second Panel Established Pursuant to the Note by the President of the Security Council of 30 January 1999 (S/1999/100) concerning the current humanitarian situation in Iraq.” (New York: UN Office of the Iraq Programme - OIP, 30 March 1999) <<http://www.un.org/Depts/oip/reports>>

^{5[5]} *ibid.* Section 18.

^{6[6]} *ibid.* Section 20.

system by means of the economic sanctions imposed on Iraq.^{7[7]} This will be further discussed. I recognise that an enormous amount of suffering has beset the Iraqi population, as a result of damage to the infrastructure, compounded by on-going economic sanctions, and I am interested in discovering to what extent the *Desert Storm* air campaign, as opposed to economic sanctions, was responsible for this.

I must stress that there is an important distinction between military actions in war, and political actions during and after a war. I recognise that non-combatants, and the infrastructure upon which they depend, will be subject to some degree of collateral damage as a result of air campaigns. However, certain political actions can also result in damage to the infrastructure of a country, such as the imposition of economic sanctions. I therefore wish to ensure that this distinction is clear throughout this paper. Certain outcomes of the Gulf War will not have been the result of the air campaign, but of the sanctions regime imposed against Iraq during and since the Gulf War. I do not deny that Saddam Hussein himself inflicted suffering on many innocent people living under his repressive regime in Iraq, and on the Kuwaitis when he invaded that state. These acts are unacceptable, and Saddam Hussein has, and should be, condemned for his violations of the Just War conventions, and of the rights of his people. If it was not for Saddam Hussein's actions in the first place, the war would not have taken place, and sanctions would not have been imposed. However, I am concerned with the conduct of the UN forces in the war, and therefore do not intend to comment on Saddam Hussein's conduct, focusing instead upon whether the UN coalition air force adhered to the Just War conventions.

The following question outlines my principle line of inquiry: Was the air campaign in any way responsible for the long-term suffering of the Iraqi people following the Gulf War? Examining the air campaign in light of the degree to which certain Just War conventions were fulfilled, will assist in discovering whether the responsibility for the long-term suffering of the Iraqi people lies with the air campaign planners. My interest in this question stems from my own conviction that the immunity of non-combatants must be respected. My commitment to ensuring that civilians do not suffer extends to protecting them from actions that fail to meet the requirements of the Just War conventions and result in threatening their basic rights. This includes damage to electricity and water supplies, leading to devastating effects upon people's health, diet and ability to earn a living, as well as immediate threats to their lives. I will be looking for evidence that the air campaign planners observed the Just War conventions in order to limit these threats.

In order to determine the extent to which the air campaign was fought so that the immunity of non-combatants would be respected, I must establish some criteria for judging this. Just War doctrine has for a long time been used to assess states' reasons for going to war, and states' conduct in war. The Just War doctrine deals with two aspects of war: *jus ad bellum* which deals with the reasons why a war is fought; and *jus in bello* which deals with conduct during a war.^{8[8]} Given that I am not concerned here with the reasons why the Gulf War was fought, but rather the way in which it was fought, I will draw on the *jus in bello* principles.

^{7[7]}a) T. Nagy. *The Role of "Iraq Water Treatment Vulnerabilities" in Halting One Genocide and Preventing Others*. Paper given at the Fourth Biennial Conference of the Association of Genocide Scholars, 12 June 2001, Minneapolis.

b) T. Nagy. "The Secret Behind the Sanctions. How the U.S. Intentionally Destroyed Iraq's Water Supply", *The Progressive*, (September 2001) <<http://www.progressive.org/0801issue/nagy0901.html>>

c) *Iraq Water Treatment Vulnerabilities*, US Defence Intelligence Agency (DIA), 22 January 1991. (Released as a public document in 1995, via the Gulfink website). An assessment of the vulnerabilities of the Iraqi water treatment system. <www.gulfink.osd.mil/declassdocs/dia/19950901/950901_511rept_91.html>

^{8[8]}J. Gory. "'Just War' or Just War? The Future(s) of a Tradition", *Politics*, vol.20, no.3, (2000) p.178.

My first chapter will involve taking certain *jus in bello* principles, drawn primarily from Walzer's *Just and Unjust Wars*, and will establish a set of criteria for what constitutes a bombing campaign in which the immunity of non-combatants is respected as far as possible. In chapter II, I will consider what was intended by the allied coalition. My primary method for discussing the intent of the operation will be to analyse the *Gulf War Air Power Surveys*, (GWAPS); particularly, Volume II, Part II, chapters six and seven: "Attacking the Core of Iraq's Military Power" and "Conclusions".^{9[9]} These surveys were compiled after the Gulf War, drawing on the archives of the US Air Force, to give a comprehensive analysis of coalition air power. I will then look at what was bombed, again through studying the *Gulf War Air Power Surveys*. I will also draw on secondary material, such as the personal accounts of strategists, members of the air force, and politicians involved in the organisation of *Desert Storm*, and academics' and journalists' accounts, along with reports compiled by international organisations such as the WHO, the UN, Greenpeace International, and UNICEF. Drawing on these sources I can discuss whether the outcome of the bombing campaign reflected the intentions behind it. Chapter III will involve an analysis of *Desert Storm* to assess whether actions during the operation, as outlined in chapter II, can be justified by the double effect principle. The double effect principle is concerned with negative side-effects of an action in war, and whether such effects can be justified. *Desert Storm* will also be assessed according to the proportionality principle, which requires that any unintended negative side-effects are proportional to the achieved acceptable effect. These principles will be further discussed in chapter I. I can then determine what constitutes a bombing campaign in which non-combatant immunity is properly respected. Again, the primary sources for this analysis will be the *Gulf War Air Power Surveys*.

The question of whether the air campaign was fought according to the above principles, selected from Just War doctrine, has three possible answers. First, I may conclude that the air campaign was fought according to these principles, and that the long-term effects are the result of political decisions rather than military actions. Second, I may decide that the campaign did not meet my criteria for a campaign in which non-combatant immunity is appropriately respected. Such an answer demands that strategists do more to ensure that these criteria are met in future conflicts. Third, I may decide that ultimately the criteria do not go far enough to ensure that non-combatant immunity is sufficiently respected. Moreover, they might provide a discourse that could be employed by protagonists to justify whatever acts they wish. In this case, some other method would be required to guarantee that the immunity of non-combatants is respected as far as is practical.

^{9[9]} T. Keaney and E. Cohen. (Director) *Gulf War Air Power Surveys (GWAPS)*. (Washington DC, John's Hopkins University and the US Air Force, 1993), Volume II, Part II, chs 6 and 7.
<<http://www.au.af.mil/au/awc/awcgate/awc-hist.htm#gulf>>

This source was obtained from the internet, and given the size of the document, pagination changed in the downloading process. For this reason the original pagination was altered. Therefore, I have numbered the first page of chapter 6 as p.1. All page numbers follow on consecutively., and refer only to Vol.II, Part II, ch.6 of the GWAPS. The same applies to chapter seven: the first page starts at p.1 and the remaining pages follow on consecutively.

Chapter I Criteria for Assessing Operation *Desert Storm*

Introduction

In order to establish a set of criteria for determining what constitutes a bombing campaign in which non-combatant immunity is appropriately respected, I must draw on already existing doctrines that help guide actions in war, and reasons for going to war. Just War theory is the oldest of these doctrines, dating back to the writings of Augustine in the fourth century, through to Aquinas in the thirteenth century, and further developed by Ramsey, Tucker and, most notably, Walzer, in the twentieth century.^{10[10]} I am concerned with establishing a set of ethical principles to guide me in my assessment of the air campaign, and to guide military decision-makers as they plan air campaigns in the future. Just War theory provides a useful starting point for establishing such a set of principles.

There is another reason for drawing the criteria from Just War theory. Ethical thought tends to draw a distinction between traditions that link judgements of right and wrong to consequences, and traditions that link them to rules. As Nardin and Mapel point out:

[this distinction] has its limitations because it is ambiguous for a tradition like liberalism which embraces both practical and rules based arguments, and it fails to incorporate thinkers such as Aristotle who emphasise neither consequences nor rules, but character and motive.^{11[11]}

The Just War tradition incorporates rules-based, consequence-based and motive-based principles. For instance, according to the *jus in bello* principles, the matter of intentionality in warfare considers the motives behind actions. The double effect principle – that assesses whether the unintentional evil consequences that result from a legitimate act can be justified, and the proportionality principle – that assesses whether negative side-effects that result from a legitimate act are proportional to the positive achieved effect,^{12[12]} incorporate consequences of actions into the equation. Yet all three notions, intentionality, double effect and proportionality, are framed as rules which should not be broken. The strength of these notions can therefore be found in their versatile approach to the judgement of actions in war.

The *Jus in Bello* principles

Walzer integrates the *jus in bello* principles into an argument about the legitimacy of performing an act that is likely to have evil consequences. He states that such an act is only permissible providing four conditions hold:

that the act is good in itself or at least indifferent, which means ... that it is a legitimate act of war; that the direct effect is morally acceptable ... that the intention of the actor is good, that is, he aims only at the acceptable effect; the evil effect is not one of his ends, nor is it a means to an ends; that the good effect

^{10[10]}Walzer, *Just and Unjust Wars*, p.178.

^{11[11]}T. Nardin and D. Mapel. (eds). *Traditions of International Ethics*. (Cambridge: Cambridge University Press, 1992), pp.297-298.

^{12[12]}H. Sidgwick, summarised in Walzer, *Just and Unjust Wars*, p.129.

is sufficiently good to compensate for allowing the evil effect; it must be justifiable under the proportionality rule.^{13[13]}

For now I am concerned with the third of the above conditions, relating to the intention of the actor. Walzer actually revises this condition, restating it thus: “The intention of the actor is good, that is, he aims narrowly at the acceptable effect; the evil effect is not one of his ends, nor is it a means to his ends, and, aware of the evil involved, he seeks to minimise it, accepting costs to himself”.^{14[14]} The implications for combatants of this condition shall be considered.

Good intentions

Firstly, the intention must be good, in that the actor must aim narrowly at the acceptable effect. This requires that an acceptable effect must result from the action. What does “acceptable” mean? To answer this it is necessary to return to one of the key principles of the Just War tradition: the immunity of non-combatants. According to Walzer, “a legitimate act of war is one that does not violate the rights of the people against whom it is directed”.^{15[15]} In other words, the unacceptable effect will be the violation of the rights of non-combatants, that is, the “people” to whom Walzer refers.

It must be stressed that the rights of non-combatants comprise more than the immediate right to life. Their permanent interests must also be protected. If the infrastructure of the country is damaged, the rights of non-combatants are threatened. By destroying electricity and water supplies, for instance, food production, sanitation and health care are severely restricted, to the point of threatening the basic rights of non-combatants. Certain products and industries, whilst they supply the enemy armies, also supply non-combatants. According to Walzer, their destruction will have just as severe an impact upon the non-combatant community as on the military forces. However, damage to such components of the infrastructure may also result from political decisions, rather than purely as a result of an air campaign, so it is important that we consider the cause behind such damage.

There is also an implication for mankind as a whole. Walzer states that we are interested in, “not only the immediate harm to individuals but also any injury to the permanent interests of mankind”.^{16[16]} For instance, if it is seen as acceptable to destroy the infrastructure in one war and thereby threaten the rights of non-combatants in the short- and long-term, this gives licence for such behaviour in other wars. In the case of the Gulf War, if we find that the damage to the infrastructure was so extensive as to threaten the rights of non-combatants, and we find it to be in excess of what the double effect and proportionality principles permit, and the causes of such destruction are not condemned, the way is open for such destruction in other conflicts, such as in Chechnya and the Balkans.

How does this notion of what is unacceptable affect the intention of the actor? Simply not to intend the violation of the rights of civilians is not sufficient. We must look for “some sign of a positive commitment to save civilian lives”.^{17[17]} Such an approach is in line with a positive rather than a negative view of rights. A positive view of rights would argue that simply not intending evil consequences, whilst not actually being committed to protecting civilians’

^{13[13]} Walzer, *Just and Unjust Wars*, p.153.

^{14[14]} *ibid*, p.155.

^{15[15]} *ibid*, p.137.

^{16[16]} *ibid*, p.129.

^{17[17]} *ibid*, p.155.

rights, involves a double violation of those rights.^{18[18]} It is not enough for combatants to simply not intend to harm non-combatants. They must actually be positively committed to saving the lives of civilians, protecting their permanent interests. This includes limiting damage to the infrastructure upon which those civilians rely, thus protecting the permanent interests of mankind.

The evil effect, means, and ends

Secondly, the use of non-combatants should neither be a means to an end, nor an end in itself. Non-combatants should never be targeted directly, nor should they be targeted in order to ensure some other end, for example, applying pressure to one's opponent through the suffering of his people. By destroying the ability of an enemy to wage war through targeting command and control capabilities, the pressure to surrender is very real. However, if this end is pursued and the consequent impact upon civilians is so destructive as to be disproportionate to this end, the criteria will not have been satisfied. The proportionality principle will be further discussed.

Minimizing the evil effect

Thirdly, being aware of the evil involved, the actor must seek to minimise that evil, even if that means increasing risks to himself. Walzer notes that we can only expect soldiers to minimise the dangers they pose to civilians to a certain extent, but that the degree to which any risk to non-combatants is permissible will vary according to factors such as the nature of the target or the urgency of movement.^{19[19]} It is also important to note that decisions regarding the degree to which risks to non-combatants can be minimised are subjective. Decision-makers in war will have their own reasons for the way in which they assess risks to soldiers and to non-combatants, and in practice, attempts will be made to eliminate the risk of losing their own forces. However, what can be asked is that they attempt to protect civilians before protecting themselves.^{20[20]}

The Double Effect principle

The principle of double effect has to do with the unintended "side-effects" of an action. For example, if an army base is targeted, and a side effect is the destruction of an adjacent civilian building, an electric power station for example, then the destruction of the power station could be justified under the double effect principle. However, these four conditions must hold in order for the double effect principle to be applied.^{21[21]} The original act, the targeting of the army base, is good in itself - it is generally accepted as a legitimate act of war. This fulfils the first condition. The direct effect, destroying the army base, is also seen as morally acceptable, so the second condition is fulfilled. Provided that the intention of the actor was only to target the army base, and the evil effect was never intended as a means to an end, nor as an end in itself, then the third condition is also fulfilled, but only if the power station was never an

^{18[18]} R. Plant. "The Justifications for Intervention: Needs Before Contexts", in I. Forbes and M. Hoffman, *Political Theory, International Relations and the Ethics of Intervention*. (London: MacMillan Press, 1993), ch.8, p.109.

^{19[19]} Walzer, *Just and Unjust Wars*, p.156.

^{20[20]} *ibid*, p.157.

^{21[21]} *ibid*, p.153.

intended target nor a means to an end. Finally, if the bad effect is proportionate to the good intended, then the fourth condition is also fulfilled.

Proportionality

The evil effect must be proportionate to the good effect.^{22[22]} Sidgwick set out the proportionality rule, arguing that it is not permissible to do, “any mischief which does not tend materially to the end, nor any mischief of which the conduciveness to the end is slight in comparison with the amount of the mischief”.^{23[23]} According to Walzer, Sidgwick’s statement that we are to “weigh the mischief done”, “presumably means not only the immediate harm to the individuals but also any injury to the permanent interests of mankind, against the contributions that mischief makes to the end of victory”.^{24[24]} The proportionality principle requires us to decide whether the evil effect can be weighed evenly against the achieved objective. Using the example, the immediate harm would be the death and injury of individuals working in the power station. However, Walzer calls on us to also consider the long-term impact. In this instance it might be that the non-combatant population does not have access to a power supply for the foreseeable future, affecting installations such as water sanitation and medical care. The absence of such facilities might inflict long-term suffering upon the non-combatant population. However, as stressed in the introduction of this paper, it is not necessarily the air campaign itself that causes such long-term suffering. Political decisions, such as imposing a restrictive sanctions regime, might be the cause of such suffering. Therefore, we must be clear about the cause of any long-term effects: military action or political after-action.

In order to apply the double effect principle, the outcome of the act must be judged not merely by the principle of proportionality, but also by the intention behind the act: whether or not the act was morally good; and whether it constituted an attempt to respect non-combatant immunity, and in so doing raised the risk to the actors in order to spare civilians from having their rights violated. Due to the complex nature of warfare, even if all four conditions are not satisfied, it is not necessarily the case that non-combatant immunity was violated. It might be that there are degrees to which each condition can be fulfilled, and that it could be argued that the greater extent to which each condition can be fulfilled, the more plausible the claim of respect for non-combatant immunity. It might be possible to conclude that if three of the conditions were met fully, and the fourth was met to a degree, then the act would have respected non-combatant immunity more than if all four conditions were met only partially.

Finally, there is no denying that the proportionality principle is subjective. There are no clear criteria for assessing whether or not the evil side-effect was proportional to an achieved objective. It might be that this subjectivity is, to a degree, compensated for by the other three conditions. However, the subjectivity of the application of the double effect and proportionality principles is problematic. We can never guarantee that their application will not be subject to people’s own interpretations and agendas. Whether this makes these principles unworkable, remains to be seen.

***Jus in Bello* principles and the air campaign**

Planners’ intentions

^{22[22]} *ibid*, p.153.

^{23[23]} H. Sidgwick, summarised in Walzer, *Just and Unjust Wars*, p.129.

^{24[24]} Walzer, *Just and Unjust Wars*, p.129.

How, then, do the principles of double effect and proportionality, along with the intentions behind acts of war, help us to define what constitutes an air campaign in which the immunity of non-combatants is appropriately respected? The intention of the bombers must never be evil: they must never intend to target civilians for purely evil intentions. They must also aim narrowly at their target, so as to avoid civilian casualties. The planners and pilots must make a concerted effort to limit evil ends. Simply not intending to bomb civilian areas, buildings or people is not sufficient. They must actively seek to avoid such effects.

Resorting to the Double Effect principle ... proportionally

In any justification of one's actions, planners involved in an air campaign must only permit the evil effect in the narrowest of circumstances. Any decision to bomb must include only targets that are accepted as legitimate targets of war, the effect of which must be morally acceptable. A morally acceptable act of war should not violate the rights of non-combatants, neither during the course of war, nor in the longer term.^{25[25]} However, I again stress that it might be political decision-makers rather than air campaign planners that must take responsibility for long-term effects. If after an air campaign, political decision-makers impose sanctions that compound the effects of the air campaign, resulting in long-term harm to civilians, it is the political decision-makers and not the air campaign planners that must be held accountable.

The direct effect must only be to attack legitimate targets of war, such as, but not limited to, military supplies, enemy soldiers, communications, road and rail networks, and power facilities used to run defences and military headquarters. In an air campaign, decisions must be made concerning legitimate targets. There are shades of meaning surrounding the term "military supplies." Walzer sets out certain criteria for what might be seen as legitimate targets,^{26[26]} based on the premise that the destruction of certain products and industries, whilst they are products and industries that supply the enemy armies, will also have an enormous impact upon non-combatants. The impact on civilians of bombing, say, the electricity supply or food production sites, must be weighed up carefully. Would aiming at such targets result in unnecessary suffering for civilians? If yes, this must be seen as an illegitimate act of war, and such installations must never be directly targeted. If such installations are targets of proportional value, their destruction must be assessed in light of the four conditions surrounding the double effect principle, bearing in mind long-term implications.

For air campaign planners, the application of the double effect principle must be subject to the proportionality principle. If they decide to pursue a series of bombings that will have known negative side-effects, they must be sure that those effects are not disproportionate to the intended good effect. If, for example, a tank was targeted, and in the process a hospital was bombed, there is little doubt that this would be a disproportionate act. If, however, a final sortie was flown, decisive enough to end a war by bombing a whole battalion, and in so doing a hospital was destroyed, there would be a stronger case for arguing that the evil effect was not disproportionate. What must be stressed is that the double effect principle must never be applied without a convincing application of the principle of proportionality, neither should it ever be the intent of the actor.

Conclusion

^{25[25]} *ibid*, p.129.

^{26[26]} *ibid*, pp.170-175.

The *jus in bello* principles provide a helpful method for assessing *Desert Storm* because they incorporate motive-based, consequence-based, and rules-based approaches to conflict. The principles demand that the motives behind any action are honourable, in that non-combatants are never targeted as an end, nor as a mean to an end, and that as far as possible, combatants commit themselves to protecting the rights of non-combatants as far as is practical. As for the consequences of the action, these are dealt with using the principles of double effect and proportionality. Any consequences that occur as a result of combatant actions must be justifiable under these two principles. Finally, this approach to ensuring that non-combatant immunity is respected, is drawn up as a set of rules that must be followed as far as possible by those involved in military planning and execution. Therefore, these principles enable an assessment of the air campaign that takes into account the degree to which this set of rules was followed, the degree to which the motives behind the air campaign were acceptable, and, finally, whether the consequences of the air campaign planners' actions were justifiable.

Chapter II Assessing the Intentions of the Air Campaign Planners

Establishing suitable criteria for assessing the intentions of the air campaign planners

In order to assess the intentions of the air campaign planners, I will return to Walzer's discussion on the performance of acts that are likely to have evil consequences, as discussed in chapter I. Walzer's argument provides four conditions which must be satisfied in order for such an act to be permissible. Whereas Walzer employs the criteria to establish whether an effect of an action is a legitimate secondary effect, I will draw on Walzer's argument to provide four criteria which can be applied independently, in order to establish whether non-combatant immunity was appropriately respected during *Desert Storm*. The four criteria are as follows:

1. the evil effect (violating the rights of non-combatants)^{27[27]} must not be one of the actor's intentions
2. the actor's intention must be to aim narrowly at the acceptable effect: an "acceptable effect" or a "legitimate" act of war is one that "does not violate the rights of the people against whom it is directed"^{28[28]}
3. the evil effect must not be a means to the actor's end
4. the actor must seek to minimize the evil effect, accepting the risks to their own life, showing "some sign of positive commitment to save civilian lives"^{29[29]}

The strength of these conditions is that they recognise that harm to civilians is an inevitable effect of conflict, yet they provide a way of limiting the harm done to non-combatants.

Taking each of these four criteria, I will offer an appropriate definition for each, and consider the extent to which they were met. My principle source for assessing the intentions of the air campaign planners, will be volume II, part II, chapters six and seven of the *Gulf War Air Power Surveys*, (GWAPS).^{30[30]} This process will involve an assessment of the way in which target sets were drawn up and how these target sets reflected the intentions of the air campaign planners; what actually was subject to air strikes; and to what degree attempts were made to limit the harm inflicted upon non-combatants.

First Criterion: The evil effect must not be one of the actor's intentions

The evil effect: not the intention of the air campaign planners

As discussed in chapter I, the evil effect is defined as violating the rights of non-combatants, including threatening their permanent interests and the permanent interests of mankind.^{31[31][31]} According to the GWAPS, civilians were never intended as direct targets.

^{27[27]} Walzer, *Just and Unjust Wars*, pp.135-136.

^{28[28]} *ibid*, pp.135-136.

^{29[29]} *ibid*, p.155.

^{30[30]} Keaney and Cohen, *GWAPS*, vol.II, part II, chs. 6 and 7.

^{31[31]} Walzer, *Just and Unjust Wars*, pp.135-136.

“There was widespread agreement from the outset of the planning process that directly attacking the people of Iraq or their food supply was neither compatible with US objectives nor morally acceptable to the American people”.^{32[32]} The GWAPS claims that the air campaign had not only been “precise, efficient and legal, but had resulted in very few civilian casualties”.^{33[33]} The director of Greenpeace’s nuclear information unit, William Arkin, stated that Greenpeace estimates of Iraqi civilian casualties caused by Coalition bombing totalled 2,278 dead and 5,976 injured.^{34[34]} A further Greenpeace source stated that allied conduct had “paved the way for positive new standards for humanitarian and military conduct”, given the relatively small number of civilian casualties.^{35[35]} This is commendable.

The target categories drawn up by the planners also indicate that civilians were not intended as direct targets. Iraq’s national power structure was divided among five broad core categories: Leadership, Key Production, Infrastructure, Population, and Fielded Forces. Within these core categories, there were a number of “strategic” targets. These strategic targets were divided among the five broad core categories of national power, as follows:

Table 1: Strategic target sets in the Gulf War^{36[36]}

Leadership	Key Production	Infrastructure	Population	Fielded Forces
Leadership (L) Command, Control and Communications (CCC)	Electric Power (E) Oil storage depots and refineries (O) Nuclear, Chemical and biological warfare capabilities and weapons programmes (C) Military Support Facilities (MS)	Bridges Rail Road Facilities (RR)		Scuds (SC)

The Survey states that “the Iraqi population was not made a direct target of bombing”.^{37[37]} From the target sets that were drawn up for the execution of operation *Desert Storm*, and from the above statements, it is clear that the population was not intended as a target.

Second Criterion: The actor’s intention must be to aim narrowly at the acceptable effect

Aiming narrowly: a definition

^{32[32]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.3.

^{33[33]} *ibid*, ch.6, p.27.

^{34[34]} *ibid*, p.27, footnote 84. (Briefing slide shown by Arkin in a presentation given to GWAPS personnel, “Civilian Casualties and Damage”, 31 October 1991).

^{35[35]} Greenpeace International. *On Impact: Modern Warfare and the Environment – A Case Study of the Gulf War*. (London, 1991), summarized by N. Finkelstein in *The Rise and Fall of Palestine*. (Minneapolis: Minnesota University Press, 1996), p.132, Note 43.

^{36[36]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, pp.1-3.

^{37[37]} *ibid*, pp.1-3.

Before discussing the air campaign in light of this criterion, it is necessary to establish an appropriate definition of the term “narrowly”. Given that the evil effect is defined as violating the rights of non-combatants, I propose that aiming narrowly means attempting to limit non-combatant deaths. However, there also needs to be some quantitative measure in place to assess whether or not the acceptable effect was narrowly aimed at. In terms of civilian deaths, we have already seen that the number of prompt deaths was small, and that Greenpeace and the US Department of Defence commended the air campaign planners for this.^{38[38]} However, I am concerned, as the title *Bomb Now, Die Later*^{39[39]} implies, with deaths of civilians in the longer term. This matter is inextricably linked to the impact that the air campaign had upon the Iraqi infrastructure. Economic sanctions were imposed five months before the air campaign, under which “dual-use” items were banned, and only medical supplies, and in humanitarian circumstances, foodstuffs were allowed to enter Iraq.^{40[40]} This would mean that “dual-use” items for the repair and maintenance of the infrastructure were likely to be scarce by the time the air campaign began. Dual-use items are those which have a civilian purpose, but which may also be used for military purposes. For example, under the sanctions, it was forbidden for Iraq to import chlorine, because as well as having a legitimate use for the treatment of water, it can also be used in the production of chemical and biological weapons. I therefore propose the following measures for assessing whether the acceptable effect was narrowly aimed at. Firstly, as the Iraqi infrastructure was already stretched, aiming narrowly would entail ensuring that as far as possible, only components of the electric power supply that were of great value to the Iraqi war effort should be targeted. Any damage over and above what was necessary for limiting the Iraqi war effort should be avoided. Secondly, in order to ensure that Iraqis retained their right to sustenance, water treatment facilities must not be targeted, and attempts must be made to ensure that water treatment facilities were not unintentionally damaged to a degree that would severely restrict access to clean water. However, I must stress again, that the air campaign planners can only be expected to take responsibility for the immediate consequences of their actions during the campaign itself. Political decision-makers may have made decisions after the war that compounded the impact of the air campaign, and resulted in long-term restrictions on the availability of components required to repair any infrastructure damage that resulted from *Desert Storm*. I will now consider the attempts made to limit civilian deaths, and will then discuss the attempts made to limit damage to the infrastructure.

Aiming narrowly: limiting deaths

The GWAPS states that the planners did attempt to avoid harming civilians, in that the population was not included among the target sets.^{41[41]} The GWAPS and Greenpeace have noted that the number of prompt civilian deaths, as a result of *Desert Storm*, was relatively small.^{42[42]} This suggests that in terms of attempting to limit the number of non-combatant deaths, the air campaign was successful. I will discuss the methods employed during the air campaign that enabled the air campaign planners to limit prompt civilian casualties.

^{38[38]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.27, and Greenpeace International. *On Impact: Modern Warfare and the Environment – A Case Study of the Gulf War*. (London, 1991), summarized by N. Finkelstein in *The Rise and Fall of Palestine*. (Minneapolis: Minnesota University Press, 1996), p.132, Note 43.

^{39[39]} E. Herring. Private communications.

^{40[40]} Nye and Smith, *After the Storm. Lessons from the Gulf War*, p.305 and 358-9. The UN imposed economic sanctions upon Iraq on August 6, 1990, under Resolution 661, with only Cuba and Yemen abstaining from voting. Only medical supplies, and in humanitarian circumstances, foodstuffs would be allowed to enter Iraq.

^{41[41]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.3.

^{42[42]} *ibid*, p.27, footnote 84. (Briefing slide shown by Arkin, “Civilian Casualties and Damage”, 31 October 1991) and Greenpeace International. *On Impact: Modern Warfare and the Environment – A Case Study of the Gulf War*. (London, 1991), summarized by N. Finkelstein in *The Rise and Fall of Palestine*. (Minneapolis: Minnesota University Press, 1996), p.132, Note 43.

The GWAPS makes much of the precision of the air campaign and how this helped to limit prompt civilian casualties.^{43[43]} It reports that the F-117 fighter aircraft were used for delivery of precision weapons in order to limit civilian casualties: “The F-117’s were able to attack high-value targets in urban areas like Baghdad time and again because, for the most part, damage could be largely confined to the targeted buildings or structures and civilian casualties avoided.”^{44[44]}

Further, Middle East Watch (MEW) confirms that “F-117 attacks over Baghdad demonstrated the ability to precisely kill military targets while minimizing civilian casualties”.^{45[45]} Critics of the air campaign have called into question the degree to which precision weapons were employed, however. These critics suggest that the use of precision weapons has been overplayed, and they draw attention to the actual proportion of precision to non-precision weapons that were deployed. Finkelstein, for instance, argues that “circumstantial evidence suggested that in cities like Basra ... the use of indiscriminate weaponry was widespread”^{46[46]} and argues that Colonel John A. Warden III, of the US Air Force, in an interview with Andrew and Leslie Cockburn, “stated flatly that precision weapons were not used in Basra, only dumb bombs”.^{47[47]} He also criticizes MEW for concluding that the coalition generally adhered to the laws of war, given this information about the use of non-precision weapons.^{48[48]} The air campaign planners are very open about the use of precision and non-precision weapons, as MEW reports when it states that General Merrill McPeak, chief of staff of the US Air Force released information at a briefing saying that “precision-guided bombs accounted for only 7,400 tonnes (or 8.8 per cent) of the approximately 84,200 tonnes of ordnance dropped by the allies during Operation Desert Storm”.^{49[49]} What Finkelstein fails to note is that “dumb bombs can be accurate if the delivery aircraft can take the time to set up the attack”, and that systems on the various coalition aircraft “provide pilots with remarkable accuracy with unguided munitions.”^{50[50]} He also fails to acknowledge that the number of civilian casualties was extremely small. In this sense his criticisms are unfounded. Given the very small number of prompt civilian deaths, it is fair to say that the evil effect was not aimed at; attempts were made to limit the number of civilian casualties.

Civilians were not direct targets, precision weapons were deployed in urban areas, and aircraft were used that could deliver weapons in ways that would confine damage to targeted buildings and structures, limiting the risk to civilians. The air campaign planners did aim narrowly at the acceptable effect.

Aiming narrowly: limiting damage to the economic infrastructure

As stated, the measures for assessing whether the air campaign planners aimed narrowly at the acceptable effect with regards to the infrastructure are as follows: firstly, given that the Iraqi infrastructure was already stretched as a result of sanctions, the air campaign planners should ensure as far as possible that only components of the electric power supply that were of great value to the Iraqi war effort should be targeted. Any damage over and above what was necessary for limiting the Iraqi war effort should be avoided. Secondly, in order to ensure that Iraqis retained their right to sustenance, water treatment facilities must not be targeted,

^{43[43]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.27.

^{44[44]} *ibid*, vol.II, part II, ch.7, p.7.

^{45[45]} Middle East Watch. *Needless Deaths in the Gulf War*. (New York: Middle East Watch, 1991), p.114.

^{46[46]} N. Finkelstein. *The Rise and Fall of Palestine*. (Minneapolis: Minnesota University Press, 1996), p.59.

^{47[47]} *ibid*, p.133.

^{48[48]} *ibid*, p.59.

^{49[49]} General M. McPeak. Briefing Transcript, quoted in Middle East Watch, *Needless Deaths in the Gulf War*, p.114.

^{50[50]} Kent D. Johnson, Lt Colonel, USAF (retired), Political-Military Advisor, USAF/RAF Certified Strategic Campaign Planner. Private Communications.

and attempts must be made to ensure that water treatment facilities were not damaged to a degree that would severely restrict access to clean water.

Power to live

Under-Secretary General Ahtisaari of the UN, on his mission to assess the humanitarian situation in Iraq in March 1991, reported that:

Virtually all previously viable sources of fuel and power ... and modern means of communication are now, essentially, defunct ... there is much less than the minimum fuel required to provide the energy needed for movement or transportation, irrigation or generators for power to pump water and sewage.^{51[51]}

This statement does not indicate the degree to which the air campaign planners were responsible for this, or whether the continuing sanctions were the cause. What does the GWAPS tell us about the targeting of the power supply and the degree to which attempts were made to limit this kind of damage? The GWAPS states, "Coalition planning ... was constrained by a conscious desire, originating with President Bush, to minimize long-term or permanent damage to Iraq's economic infrastructure".^{52[52]} However, the planners calculated that targeting electric power and oil production would help to limit the capabilities of Iraq's Leadership, Command, Control and Communications.^{53[53]} Attacking electricity and oil targets was "perceived as disrupting the ability of Iraq and its military forces to function"^{54[54]}, and the loss of electricity in particular "would degrade Iraqi military capabilities in several key areas".^{55[55]} Meanwhile, attacking oil would prevent back-up generators from being used to turn Iraqi power back on.^{56[56]} It is clear, then, that electric power and oil production were seen as important components of the infrastructure for the Iraqi war effort, and that they were therefore important targets for the allied coalition. However, did the air campaign planners proceed with caution in order to minimize long-term and permanent damage to the Iraqi infrastructure, as they, and President Bush, desired?

In the case of the electric power supply, the air campaign planners did agree that only transformer/switching yards and control buildings were to be targets, and not generator halls, boilers and turbines, which would result in long-term damage to the infrastructure, and so placed restrictions on these components of the electric power system.^{57[57]} However, the GWAPS also reports that these restrictions were not always adhered to:

The self-imposed restriction against hitting generator halls or their contents was not widely observed ... in large part because the planners elected to go after the majority of Iraq's 25 major power stations and the generator halls offered the most obvious aimpoints.^{58[58]}

The Survey states that this discrepancy between the policy to limit damage, and what actually occurred, "illustrates the gap that inevitably exists between specifying a target ... and the

^{51[51]} J. Perez de Cuellar. *Report S/22366 to the United Nations Security Council*, p.4, Sections 9-10.

<<http://www.un.org/depts/oip/reports>>

^{52[52]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, pp.19-20.

^{53[53]} *ibid*, p.19.

^{54[54]} *ibid*, p.6.

^{55[55]} *ibid*, p.19.

^{56[56]} *ibid*, p.19.

^{57[57]} *ibid*, p.20.

^{58[58]} *ibid*, p.20.

specific aimpoints to be hit there”.^{59[59]} The problem is that whilst the intentions of the planners were to minimize damage, they saw it as more practical to ignore these restrictions, given that the restricted objects often provided the best aimpoints available to the combatants. A further problem is that these restrictions were not hard and fast rules, but rather “self-imposed” restrictions and “informal policies”. Sometimes combatants may have been instructed to attack a particular installation without receiving instructions about which aimpoints they were required to target. The stated intentions were to limit damage by restricting the type of aimpoints that were viewed as acceptable, disallowing targets such as generator halls and distillation towers, but these restrictions were not binding. The fact that these restrictions were not binding may have been one of the many causes of the degree of devastation inflicted upon the power supply. I can ask that aimpoint restrictions be adhered to, but recognise that in certain circumstances, a pilot may not always be able to fulfil these requirements.

The GWAPS outlines the extent of the damage inflicted upon electric power during *Desert Storm*:

Almost 88 per cent of Iraq’s installed generation capacity was sufficiently damaged or destroyed by direct attack, or else isolated from the national grid through strikes on associated transformers and switching facilities, to render it unavailable; the remaining 12 per cent ... was probably unusable other than locally due to damage inflicted on transformers and switching yards.^{60[60]}

Even those components of the electric power supply that did not have restrictions placed upon them, contributed to the almost complete shut-down of Iraq’s power generation capacity. The almost complete shut-down of electric power should have been short-lived, given that the war was over within six weeks, and then the operation of repairing any damage could, potentially, have begun.

The GWAPS claims that “the Iraqis were able to restore commercial power considerably faster than had been anticipated ... the main power plant in Baghdad ... by mid-1992 was reportedly working at 90 per cent of its pre-war capacity”.^{61[61]} This demonstrates that with the appropriate materials, any destruction to electric power components could be repaired very quickly. Yet, this does not match up with the situation across the rest of Iraq. Ahtisaari’s report discussed the extent of the damage to the power supply, arguing that “bombardment has paralysed oil and electricity sectors almost entirely”, and predicted that it could take up to thirteen months for power generation to reach even minimal levels – twenty five per cent of full capacity - across the whole country.^{62[62]} Nevertheless, this report does not mention the degree to which economic sanctions are responsible for this long-term damage. As we know, the air campaign planners came under criticism after the event because many thousands died as a result of the “indirect detrimental health effects”, due partly to the damage to electric power.^{63[63]} I do not share the view that the air campaign planners are solely responsible for these long-term effects. The air campaign did result in an enormous degree of damage to electric power. However, in normal circumstances this damage would have been repaired relatively quickly. Worth noting too, is that the Iraqi government may have prioritised areas where the reconstruction effort should be concentrated. If Baghdad’s power

^{59[59]} *ibid*, p.20.

^{60[60]} *ibid*, p.24.

^{61[61]} *ibid*, p.29.

^{62[62]} J. Perez de Cuellar, *Report S/22366 to the United Nations Security Council*, p.10, Section 35.

<<http://www.un.org/depts/oip/reports>>

^{63[63]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.27, footnote 81 and World Health Organisation. *The Health Conditions of the Population in Iraq since the Gulf Crisis*. (New York, World Health Organisation, March 1996), WHO/EHA/96.1 <<http://www.who.int/eha/>>

supply could be repaired, why not that of other cities? The combination of the UN's political decision to continue to impose sanctions that limited dual-use products, and the unwillingness of Saddam Hussein to engage in reconstruction outside of Baghdad, has contributed to the devastating long-term effects.

The UN Security Council commissioned another panel to assess the humanitarian situation in Iraq in January 1999, almost eight years after the war. Its report highlights the degree to which the power supply was still far from being fully functional. Prior to the Gulf War, in 1990, power station units were capable of generating 8,903 MW. By 1999 the power station units were capable of generating about 7,500 MW, "but inadequate maintenance and poor operating conditions have reduced the power actually generated to about half that figure at 3,500 MW."^{64[64]} This means that in 1999 power station units were actually generating only 39.3 per cent of the 1990 capacity. The key words here are "inadequate maintenance". As mentioned in the introduction to this paper, we must distinguish between military action and political decisions. The air campaign did cause widespread damage to electric power, and the extent to which this damage was justified will be further discussed in chapter III. However, as the GWAPS states, power plants were often targeted several times because intelligence sources revealed that the Iraqi forces were able to repair the damage and restore power on many occasions throughout the air campaign.^{65[65]} This suggests that with the appropriate equipment, power could be restored with relative speed. However, the economic sanctions have also had an impact upon the maintenance of the power supply following the war. Given that the sanctions imposed in 1990, under UN Security Council Resolution 661, banned the import of all items into Iraq other than "supplies intended strictly for medical purposes, and, in humanitarian circumstances, foodstuffs",^{66[66]} and that sanctions continued to be enforced for years after the war, the repair of electric power was delayed, leading to serious consequences for the Iraqi population. Thus, political decisions, whether justifiable or not, to continue to enforce sanctions and thus prevent the entry into Iraq of vital components needed to fix the power supply, are far more to blame for the long-term impact upon the infrastructure than the initial damage inflicted during the air campaign.

Water of life and death

The second measure for assessing whether the air campaign planners aimed narrowly at the acceptable effect, is to determine whether water treatment facilities were targeted, and whether attempts were made to ensure that water treatment facilities were not damaged to a degree that would severely restrict access to clean water. In chapter six of the GWAPS, water and sewage works are not defined as targets. They are not included among any of the target categories. Therefore, it is clear that water treatment facilities were not intended as targets by the air campaign planners. Recently declassified documents reveal that the US Defence Intelligence Agency was only too aware of the impact that the bombing campaign might have on water treatment components, if water facilities were damaged as a double effect of the targeting of other categories. An intelligence analysis document entitled *Disease Information*, circulated in January 1991, and declassified in 1995, highlights the potential [effects](#) that bombing could have on disease occurrence in Baghdad:

Food- and waterborne diseases have the greatest potential for outbreaks in the civilian and military population over the next 30 to 60 days. Increased incidence of diseases will be attributable to degradation of normal preventive medicine, waste disposal, water purification/distribution, electricity, and decreased ability

^{64[64]} United Nations Report, *Annex II of S/1999/356*, p.7 <<http://www.un.org/Depts/oip/reports>>

^{65[65]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.22.

^{66[66]} Nye And Smith, *After the Storm*, Appendix B, UN Security Council Resolution 661, pp.358-9.

to control disease outbreaks. Any urban area in Iraq that has received infrastructure damage will have similar problems.^{67[67]}

This demonstrates that the US Department of Defence and US government were aware of the possible consequences for the Iraqi infrastructure. Nagy has claimed that this, along with a selection of similar documents, represents a resolve on the part of the US government through its policy of sanctions to commit genocide against the Iraqi population.^{68[68]} It is important to note that these documents do not represent actions in the part of the air campaign planners to deliberately damage the water supply, but instead demonstrate the knowledge that the US government had of the potential effects of the bombing campaign. Having carefully examined these documents, I find no instruction to inflict damage upon the infrastructure through the actions of the air campaign planners, but the documents do indicate that the US authorities knew of the possible humanitarian consequences of sanctions when coupled with any damage caused by the air campaign.

Former US Attorney-General Ramsey Clark, after a visit to Iraq during February, 1991, states that, "In all areas we visited, and all other areas reported to us, municipal water processing plants, pumping stations and even reservoirs have been bombed".^{69[69]} Finkelstein states that according to a Reuters report, after the bombing of the Basra plant, the largest of Iraq's power plants, "Basra came close to drowning in its own filth".^{70[70]} I do not dispute these eyewitness accounts of the damage to water treatment facilities. My question, however, is whether this damage to water treatment facilities was deliberate. It could be that this damage to water treatment facilities was the result of collateral damage. It is also possible that missiles fired by the Iraqis themselves may have fallen on civilian structures during the Gulf War, and that this may have contributed to some devastation of the infrastructure.^{71[71]} Whilst I cannot dwell on this matter, further research might entail calculating the occurrence of such damage as a result of the fall-out of Iraq's own munitions. Nowhere can I find any evidence to suggest that water treatment facilities were ever deliberately targeted.

What should be considered, though, is the impact that the damage to the power supply had upon the availability of clean water. In the aftermath of the war, Ahtisaari reported in March 1991 that the damage to the power supply was part of the reason for the contamination of Baghdad's water supply:

In those areas where there are no generators, or generators have broken down, or the fuel supply is exhausted, the population draws its water directly from polluted rivers and trenches. This is widely apparent in rural areas.^{72[72]}

As with electric power, so with water, the impact upon the population should have been short-lived. Immediately after the war, had equipment been available for repair of the infrastructure, such damage could have been repaired within months. However, in 1996 the World Health Organisation (WHO) reported that whilst there were no cases of cholera in

^{67[67]}Defence Intelligence Agency, US. *Disease Information*. (DIA, January 15 1991), 950901_0504rept_91.txt, p.91, declassified January 9, 1995.

<http://www.geocities.com/ruth_blakeley/declassdocs/dia/19950901/950901_0504rept_91.html>

^{68[68]} T. Nagy. "The Secret Behind the Sanctions. How the U.S. Intentionally Destroyed Iraq's Water Supply", *The Progressive*, (September 2001) <<http://www.progressive.org/0801issue/nagy0901.html>> and *The Role of "Iraq Water Treatment Vulnerabilities" in Halting One Genocide and Preventing Others*.

^{69[69]} R. Clark. *The Fire This Time. US War Crimes in the Gulf*. (New York: Thunder's Mouth Press, 1994), p.255.

^{70[70]} N. Finkelstein., *The Rise and Fall of Palestine*, p.133.

^{71[71]} K. Johnson. Private Communications.

^{72[72]}J. Perez de Cuellar, *Report S/22366 to the United Nations Security Council*, p.7, Sections 21 and 22. <<http://www.un.org/depts/oip/reports>>

1990 in Iraq, 1,217 cases were reported in 1991, and 1,344 in 1994. As for typhoid, in 1990, only 1,691 cases were reported, whereas in 1994 there were 24,474 cases.^{73[73]} It is not surprising, therefore, that the WHO reports that the mortality rate of children under five years of age increased six-fold between 1990 and 1994.^{74[74]} It explains the burgeoning mortality rate and incidence of infectious diseases as being a result of the following factors:

The extensive destruction of electrical generating plants, water-purification and sewage treatment plants during the six-week 1991 war, and the subsequent delay or incomplete repair of these facilities, leading to a lack of personal hygiene, have been responsible for an explosive rise in the incidence of enteric infections, such as cholera and typhoid.^{75[75]}

The “subsequent delay or incomplete repair of these facilities” is not due to the actions of the air campaign planners, but the political decision to continue to impose economic sanctions. This has meant that items required to repair damage to the power supply, and chemicals required to treat water, because of their “dual-use” nature, have not been permitted to enter Iraq.^{76[76]} Again, it is not that the air campaign planners failed to aim narrowly at the acceptable effect, but rather that political decisions have resulted in the evil effect – the suffering of many Iraqis since the war.

Third Criterion: The evil effect must not be a means to the actor’s ends

The third criterion states that the evil effect must not be a means to the actor’s ends. This includes ensuring that the infrastructure of the state is not threatened in the name of bringing pressure to bear on that country’s leaders. As far as *Desert Storm* is concerned, there is no doubt that to a degree, the evil effect was viewed as a means to the actors’ ends among some of the air campaign planners, and the GWAPS confirms this. The intention of the planners was to disrupt the electric power system, “thus forcing the entire country abruptly onto back-up power”^{77[77]}, but also disabling back-up power by targeting oil plants so that use of back-up generators would also be restricted.^{78[78]} Not only was this action meant to “degrade Iraqi military capabilities in several key areas”, but it was also intended to “depress the morale of the Iraqi people in ways that might serve to loosen Saddam Hussein’s political grip on the country”.^{79[79]} There are further references in the GWAPS to this desire to put pressure upon the Iraqi people in the hope that this would bring about a change in the regime: “The Coalition’s ‘targeting’ of the will of Iraq’s civilian population was limited ... to psychological operations and indirect effects stemming from the bombing of other target categories.”^{80[80]}

What, precisely, were the “indirect effects” that were to result from attacks on other target categories? The GWAPS does not define these “indirect effects”. Was it hoped that the Iraqi people would suffer the effects of the absence of a functioning power supply, such as no clean water, and unavailability of adequate healthcare, in order that they might put pressure on the regime? In this instance, there is plausible evidence to suggest that some of the air campaign

^{73[73]} World Health Organisation. *The Health Conditions of the Population in Iraq since the Gulf Crisis*. (New York, World Health Organisation, March 1996), WHO/EHA/96.1 <<http://www.who.int/eha/>>

^{74[74]} *ibid.*

^{75[75]} *ibid.*

^{76[76]} See E. Herring, *Between Iraq and a Hard Place: A Critique of the British Government’s Case for UN Economic Sanctions*, (Forthcoming in *Review of International Studies*, January 2002, vol.28, no.1, pp.39-56), pp.8-9 and <<http://www.casi.org.uk>>

^{77[77]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.19.

^{78[78]} *ibid.*, p.19.

^{79[79]} *ibid.*, p.19.

^{80[80]} *ibid.*, p.3.

planners did wish to inflict some level of discomfort upon civilians, but it is not clear what level of discomfort:

As for civilian morale, some of the air planners, including General Glosson, felt that ‘putting the lights out on Baghdad’ would have psychological effects on the average Iraqi ... By demonstrating that Saddam Hussein could not even keep the electricity flowing in Baghdad, it was hoped the Ba’th Party’s grip on the Iraqi population could be loosened, thereby helping to bring about a change in the regime.^{81[81]}

This passage from the GWAPS is referenced as information given by Colonel Kiraly and Lieutenant-Colonel Kistler, both of whom participated in the planning of the air campaign. They apparently stated that:

There was considerable discussion ... of the results that could be expected from attacking electric power. Some ... argued that ... the loss of electricity in Baghdad and other cities would have little effect on popular morale; others argued that the affluence created by petro-dollars had made the city populations psychologically dependent on the amenities associated with electric power.^{82[82]}

The GWAPS adds that General Glosson confirmed that he “independently reached the view that ‘turning the lights off in Baghdad’ would effect Iraqi morale, based on discussions with Arab officers whose countries joined the coalition”.^{83[83]} Some would argue that this sort of pressure does not amount to the evil effect, given that “putting the lights out” does not amount to violating the rights of people, only to making civilian life uncomfortable. If “putting the lights out on Baghdad” was the only consequence of the targeting, I would concede that this was not an evil effect being used as a means to the air planners’ ends. However, the damage to Iraq was much more serious than simply “putting the lights out”, given that almost 88 per cent of the electric generating capacity was sufficiently destroyed to render it unavailable, and that the remaining 12 percent was unusable due to the damage inflicted upon switching yards and transformers.^{84[84]}

The *jus in bello* principles clearly state that the non-combatant population should never be used to put pressure on the state’s leaders. Even though it is not clear to what degree these discussions regarding the impact that damage to the power supply would have upon the morale of the people influenced the target planning, what is clear is that “targeting” the people psychologically, and through “indirect effects” was seen as acceptable. This is not permissible, and I conclude that the air campaign planners did not fully satisfy the third criterion.

Fourth Criterion: Actors must seek to minimize the evil effect, accepting risks to their own lives

Finally then, the actor must seek to minimize the evil effect, accepting the risks to their own lives, showing, as Walzer states “some sign of a positive commitment to save civilian lives.”^{85[85]} It is true that the number of civilian deaths as an immediate consequence of *Desert Storm* was relatively small. However, hundreds of thousands of civilians, and children in

^{81[81]} *ibid*, p.19.

^{82[82]} *ibid*, p.23, footnote 53.

^{83[83]} *ibid*, p.23, footnote 53.

^{84[84]} *ibid*, p.24.

^{85[85]} Walzer, *Just and Unjust Wars*, p.155.

particular, have died since the Gulf War.^{86[86]} This, though, is the result not so much of the actions of the air campaign planners, but the after-action of the political decision-makers who chose to continue to impose a repressive sanctions regime against Iraq.

Non-combatants must never be targeted in war, therefore the planners involved in air campaigns must do everything they can to minimize the risk to civilians, even at risk to combatants. Given the small number of civilian deaths as a direct result of the air campaign, it seems that the air campaign planners did seek to minimize the evil effect, in this aspect of military action. Had there been a greater commitment to minimizing the risk to civilians in the long-term by the political decision-makers after the event, then we would not be witnessing the awful devastation that has beset the Iraqi people since the Gulf War. For instance, as the UN reported just after the war:

Iraqi rivers are heavily polluted by raw sewage, and water levels are unusually low. All sewage treatment and pumping plants have been brought to a virtual standstill by the lack of power supply and the lack of spare parts. Pools of sewage lie in the streets and villages. Health hazards will build in the weeks to come.^{87[87]}

Health hazards did build, resulting in explosive rises in maternal and child mortality rates over the subsequent six years, in part due to communicable and water-borne diseases.^{88[88]} As we have seen, the devastation of the power supply was widespread, but it was the political decision to continue to impose sanctions, in part due to Saddam Hussein's defiance, that prevented the repair of the damage, and contributed to these horrors faced by Iraqi civilians for years to come.

Conclusion: Not direct targets, but direct victims

Throughout the planning process it is well documented by the GWAPS that the planners did not make civilians a direct target category, as this was not compatible with coalition objectives. Therefore, deliberately targeting civilians was not their intention. Nevertheless, many thousands of people have died since the Gulf War,^{89[89]} not because of the damage meted out by the air campaign on the power supply in particular, but because political decision makers continued to impose economic sanctions, preventing this damage from being repaired.

As far as aiming narrowly at the acceptable effect is concerned, I put forward two measures for establishing whether this was the case. Firstly, as the Iraqi infrastructure was already stretched, aiming narrowly would entail ensuring that as far as possible, only components of the electric power supply that were of great value to the Iraqi war effort should be targeted. Any damage over and above what was necessary for limiting the Iraqi war effort should be avoided. Secondly, in order to ensure that Iraqis retained their right to sustenance, water treatment facilities must not be targeted, and attempts must be made to ensure that water treatment facilities were not damaged as a double effect to a degree that would severely restrict access to clean water.

^{86[86]} United Nations Report, *Annex II of S/1999/356* <<http://www.un.org/Depts/oip/reports>>

^{87[87]} J. Perez de Cuellar, *Report S/22366 to the United Nations Security Council*, Section 24, p.8 <<http://www.un.org/depts/oip/reports>>

^{88[88]} United Nations Report, *Annex II of S/1999/356*, Section 18, p.5. <<http://www.un.org/Depts/oip/reports>>

^{89[89]} The United Nations Children's Fund (UNICEF) and the government of Iraq. *Child and Maternal Mortality Survey 1999: Preliminary Report* stated that the number of deaths among Iraqi children under five years of age was 500 000 over the anticipated death rate between 1991 and 1998. <<http://www.unicef.org/reseval>>

It was intended that the power supply would be sufficiently devastated in order to restrict the capabilities of the Iraqi armed forces. This is a legitimate act of war. As has been demonstrated, the power supply was almost completely devastated, and what was not destroyed was rendered dysfunctional.^{90[90]} However, was it not for continuing economic sanctions after the Gulf War, this damage could have been swiftly repaired, and the long-term suffering of the Iraqis avoided. Whilst water treatment components were not targeted directly, the damage to the power supply could not be repaired because of the sanctions, and consequently water treatment facilities were rendered inoperable. I conclude that the acceptable effect was narrowly aimed at by the air campaign planners and that the long-term suffering is the result of political decisions, rather than military actions.

There is no doubt that the evil effect, violating the rights of non-combatants, was a beneficial side-effect for the ends of some of the air campaign planners. Civilians should not be intentionally targeted in order to apply pressure to one's opponent. Yet the GWAPS has no qualms about stating that the air campaign planners saw psychological pressure, and pressure from "indirect effects", as acceptable methods of attempting to oust Saddam Hussein. Applying psychological pressure was seen by some of the planners as an acceptable intention, as were "indirect effects", whatever these may have been. By severely damaging the infrastructure, particularly electric power, it was hoped by some air campaign planners, that civilians would put pressure upon Saddam Hussein and overthrow the Ba'th regime. Whether this influenced the targeting itself or not, targeting Iraqi people psychologically, and permitting pressure to be felt from "indirect effects", were still seen as justifiable methods of warfare. The *jus in bello* principle clearly state that they are not.

Finally, the very small numbers of immediate deaths suggest that the air campaign planners' efforts to minimize harm to civilians were sufficient. It is therefore not the actions of the air campaign planners, but the imposition of sanctions that has resulted in the long-term suffering of the Iraqi people. Civilians may not have been direct targets, but as a result of sanctions, they have certainly ended up being direct victims.

^{90[90]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.24.

Chapter III Double Effect and Proportionality in Operation

Desert Storm

Introduction

The aim of this chapter is to take my findings from chapter II, and discuss them in light of the double effect and proportionality principles. I now intend to employ the criteria drawn up in chapter I to assess the consequences of the air campaign and ascertain whether its impact can be justified according to the double effect principle. In other words, was the extent of the damage to the infrastructure, as a result of the air campaign, an intended effect, or was it an unintended double effect? The damage may have been intended by the air campaign planners to achieve a particular end. Alternatively, it is possible that the extent of the damage was unintended. That is, some damage may have been intended but some may have been inflicted over and above what was intended.

I am also interested in the degree to which the negative consequences of the campaign were proportional to the achieved acceptable effect. In order to assess the degree to which the proportionality principle justifies the double effects, I will establish guidelines by which we can weigh these up with the achieved, legitimate outcomes. It may be that on the whole, the negative consequences were proportional to the achieved objective. I may decide that the negative effects were not proportional, which raises doubts about the degree to which non-combatant immunity was respected. Alternatively, I might conclude that the impact of the air campaign has only been disproportionate because of the compounding effects of the economic sanctions.

What emerges from chapter II is that an immense amount of damage was inflicted upon electric power.^{91[91]} This has had serious consequences for the treatment of water in Iraq. In 1999 the World Food Programme estimated that access to potable water was 50% of the 1990 level in urban areas and only 33% in rural areas.^{92[92]} This contributed to the increase of infectious diseases such as cholera and typhoid, which previously were scarcely encountered.^{93[93]} As mentioned in chapter II, the WHO, in its 1996 report on health conditions in Iraq, states that this “explosive rise in the incidence of enteric infections” is partly the result of “the extensive destruction of electrical generating plants, water-purification and sewage plants during the six week Gulf War, and the subsequent delay or incomplete repair of these facilities”.^{94[94]} It adds, “The sanctions imposed on Iraq ... have prevented the country from repairing all of its damaged or destroyed infrastructure, and whenever attempts have been made, these have been incomplete”.^{95[95]} We see here, then, the distinction between the military action and the political after-action. I recognise that it was the bombing campaign that caused serious damage to the Iraqi infrastructure, and electric power in particular. Nevertheless, this damage could have been repaired much more swiftly, had it not been for the continuing imposition of economic sanctions which prevented the

^{91[91]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.24.

^{92[92]} United Nations Report, *Annex II of S/1999/356* <<http://www.un.org/Depts/oip/reports>>

^{93[93]} World Health Organisation. “The Health Conditions of the Population in Iraq since the Gulf Crisis”.

(WHO, March 1996, WHO/EHA/96.1) <<http://www.who.int/eha/>>

^{94[94]} *ibid.*

^{95[95]} *ibid.*

import of dual-use components needed to repair the damage.^{96[96]} However, I am concerned with the air campaign itself: whether the extent of the damage inflicted upon electric power during the campaign was intended, and whether it was proportional to the achieved objective.

It is necessary to consider the power supply in particular, as it was the damage it sustained, followed by the compounding effects of economic sanctions, that resulted in devastating consequences for the Iraqis. I propose four questions in order to assess whether the devastation of electric power can be justified according to the principles of double effect and proportionality: What was intended by attacking electric power? How is the damage to electric power justified by the US Air Force coalition? Can it be argued that the long-term damage to the Iraqi infrastructure was an unintended double effect of the other targeting objectives? Was the damage to the power supply during the war, and its consequent effects, proportional to the achieved objective?

What was intended by attacking electric power?

The reasoning behind attacking Iraqi power was that the air force planners believed this would limit the capabilities of the Iraqi armed forces to continue with the war. As the GWAPS states, “In the case of Iraq’s electric power system, coalition air planners had reached the judgement that its loss would degrade Iraqi military capabilities in several key areas.”^{97[97]} Attacking such targets to limit the abilities of enemy forces is not unusual. As argued in Chapter I, it is acceptable under the *jus in bello* principles of warfare, to attack targets whose damage will limit the capabilities of the enemy forces, provided every attempt is made to limit the harm done to the rights of non-combatants. It is clear from Chapter II that attacks on electric power were extensive, so we must consider the justifications made by the allied air force for attacking these components of the infrastructure, to gauge whether attacks upon components of the infrastructure met with the double effect and proportionality principles.

How is the widespread damage to electric power justified by the US Air Force Coalition?

The GWAPS does acknowledge that criticisms have been levelled against the air campaign for the large number of postwar deaths that have occurred as a result of the damage to the power supply:

One criticism raised after the war was that the bombing of electric power had ‘contributed to’ 70,000 – 90,000 postwar civilian deaths above normal mortality rates over the period April to December 1991 – principally because of the lack of electricity in Iraq for water purification and sewage treatment.^{98[98]}

The initial response to these criticisms, outlined in the next paragraph of the GWAPS, is to reiterate that the number of immediate civilian casualties was very small. It argues: “by comparison with most previous wars ... the strategic air campaign had not only been precise, efficient and legal but had resulted in very few civilian casualties.”^{99[99]} This is a fair response. Civilian casualties were small in number. Yet this does not address the matter of

^{96[96]} For further discussion of the legitimacy of the ongoing imposition of sanctions against Iraq, See Herring, *Between Iraq and a Hard Place: A Critique of the British Government’s Case for UN Economic Sanctions*. Herring discusses the British Government’s justifications for retaining sanctions against Iraq, and demonstrates that Saddam Hussein has actually complied with most of the various demands made by the UN, and yet shows that the sanctions have not been modified.

^{97[97]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.19.

^{98[98]} *ibid*, p.26.

^{99[99]} *ibid*, p.27.

the postwar deaths, for which some critics have blamed the air campaign planners. However, as already demonstrated, the postwar deaths are largely due to the political after-action, rather than the air campaign itself. The air campaign did result in a great deal of destruction to electric power in particular, but the ability of the Iraqis to rapidly get these functioning again many times during the war^{100[100]} demonstrates that with the appropriate equipment, such facilities can be repaired relatively quickly. However, with sanctions in place, the equipment required for repair dwindled in quantity and eventually became unavailable. The GWAPS does take some responsibility for the widespread damage inflicted upon electric power, over and above what was intended, when it refers to the fact that despite the air campaign planners' aims to limit targeting to switching facilities and transformers rather than boilers and generator halls, these installations were hit.

As categories, boilers and generator halls at the plants attacked were hit about as often as transformers and switching yards ... Since the stated policy of the coalition air planners was to target transformers and switching facilities in lieu of boilers and generator halls, it does appear that more damage was done than had been originally intended.^{101[101]}

This demonstrates that the intentions of the air campaign planners were to limit the damage to the Iraqi infrastructure, but recognises that the outcome of the air campaign did fall short of these intentions. It then explains why these intentions were not met, stating that the shortcomings were:

explicable in terms of the difficulties encountered in making everyone involved fully cognizant of what was intended, the practical tension between initially shutting down Iraqi electric power plants and then ensuring that they could not resume operations, long-standing preferences for generator halls as aim points, and uncertainties about both the bomb damage assessment and the exact degree of damage required to “turn the lights off in Baghdad”.^{102[102]}

This statement provides some answers to the question of the damage to electric power over and above what was intended. The GWAPS provides further justifications for the damage that was inflicted, namely, that it was assumed by the planners that as soon as the war was over, the coalition would help provide the means to repair any damage that resulted from the bombing campaign, as occurred after World War II. The GWAPS reports that the air campaign planners presumed that if the Iraqi forces were “decisively defeated”, the Iraqi leader would not survive long in power, and that the air campaign planners “reasonably presumed that once an accommodation had been reached with the new government in Baghdad, members of the coalition could provide the parts and anything else necessary to restore electric power speedily throughout Iraq.”^{103[103]} The Survey states that instead of Saddam Hussein being ousted he “both retained power and continued to defy the UN, thereby himself causing economic sanctions to be left in place that prevented coalition assistance in reconstruction or humanitarian relief.”^{104[104]}

We see again the distinction between military action during the air campaign, and political after-action. In military terms, it was not unreasonable of the air campaign planners to presume that after the war, assistance would be given to rebuild the Iraqi infrastructure. The damage to the infrastructure was indeed extensive, but the long-term effects were primarily

^{100[100]} *ibid*, p.22.

^{101[101]} *ibid*, p.28.

^{102[102]} *ibid*, p.28.

^{103[103]} *ibid*, p.29.

^{104[104]} *ibid*, p.29.

the result of the political decision to continue to impose economic sanctions that prevented the repair of vital components of the infrastructure, rather than due to the damage inflicted by *Desert Storm*.

Was the long-term damage to the Iraqi infrastructure an unintended double effect of the other targeting objectives?

It is clear that the intended effect of targeting Iraqi electric power installations was to limit the capabilities of the Iraqi forces to continue to fight. It is also clear that due to on-going economic sanctions, the impact of the bombing campaign, rather than being put right after the war, has been exacerbated. The compounding effects of sanctions have resulted in grave consequences for the Iraqis. For instance, UNICEF reported that the number of deaths among Iraqi children under five years of age was 500,000 over the anticipated death rate between 1991 and 1998.^{105[105]} However, the air campaign planners cannot be held responsible for the impact of economic sanctions. This is the consequence of the decisions taken by politicians after the air campaign was complete.

Whilst the damage to electric power was extensive, the intention was that it would limit Iraqi capabilities to fight, but would not result in long-term negative effects, as demonstrated in chapter II. Further, as also demonstrated in chapter II, the air campaign planners envisaged that after the war, components required to repair any damage inflicted would be readily available. Thus, the long-term damage to the Iraqi infrastructure was neither an intended effect, nor an unintended double effect of the air campaign. In chapter II, regarding the third criterion for assessing the intentions of the air campaign planners, I did conclude that for some of the air campaign planners, exerting psychological pressure upon the civilian population and the indirect effects resulting from the targeting of other categories, were seen as a possible bonus in that they might encourage the people to put pressure on the regime and even oust Saddam Hussein. However, it is not clear whether these views had any significant influence on the planning of the campaign. Further, if it did, these indirect effects were only meant to exert pressure that might result in the ousting of Saddam Hussein during the campaign itself, and not in the long-term. Therefore, I conclude that the long-term damage to the infrastructure was neither an intended nor an unintended effect of the air campaign itself.

Was the damage to the Iraqi power supply, and its consequent effects, proportional to the achieved objective?

The *jus in bello* principles call on combatants to ensure that the double effects of their actions do not outweigh the achievement of the good effect.^{106[106]} Double effects, where they cannot be avoided, must not be disproportionate to the intended goal. However, the application of the proportionality principle is highly subjective. The air campaign planners would argue that any secondary effects were outweighed by the fact that the Iraqi forces were defeated quickly, resulting in a rapid end to the war, and therefore limiting civilian casualties over a long period of time. On the other hand, viewed from the perspective of the Iraqi civilians, who have undergone much suffering since the war, the double effects were disproportionate to the achieved objective. Nevertheless, the long-term consequences for the Iraqi people, such as the inability to treat water, are the result of the political decision to continue to impose economic sanctions. Thus, military action and political after-action must be separated.

^{105[105]}The United Nations Children's Fund (UNICEF) and the government of Iraq. *Child and Maternal Mortality Survey 1999: Preliminary Report* stated that the number of deaths among Iraqi children under five years of age was 500 000 over the anticipated death rate between 1991 and 1998. <<http://www.unicef.org/reseval>>
^{106[106]} H. Sidgwick, summarised in Walzer, *Just and Unjust Wars*, p.129.

Firstly, then, I propose the following measure to determine whether the damage to electric power was proportional to the achieved objective, a rapid allied victory: damaging electric power would have to contribute substantially to the weakening of the Iraqi forces to achieve coalition victory. That is to say that the damage to the power supply must not have merely caused mild inconvenience for the Iraqi forces. Rather, it must be clear that the damage severely restricted the capabilities of the Iraqi forces to fight. I will then discuss the degree to which the air campaign planners, in damaging electric power, can be held responsible for the long-term suffering of the Iraqi population.

According to the air campaign planners, targeting electric power was necessary to weaken the capabilities of the Iraqi forces to continue in war, enabling a rapid victory for the coalition. The GWAPS states that this objective was achieved, with the electric power system being “shut down fairly quickly under air attack, and both the Iraqi leadership and military forced onto back-up power systems for the duration of the conflict”.^{107[107]} That the Gulf War was over within six weeks, strongly suggests that shutting down electric power did significantly contribute to the rapid defeat of the Iraqi forces, and that therefore, the bomb damage to electric power can be justified according to the proportionality principle.

However, I must say a little more about the effects of being forced onto back-up power, and the impact that this would have upon the Iraqi forces to fight. Back-up power would have consisted of electric generators, usually powered by diesel. Short of obtaining information from the Iraqis themselves, it is very difficult to ascertain how disabling being forced onto back-up power would have been. However, information from a retired Lt. Colonel of the US Air Force, now a political-military consultant to the Pentagon, does provide some clues. Back-up power “usually powers small radios and transmitters, and cannot be used on a regular basis to power extensive command and control systems.”^{108[108]} From his own experience and exercises, working with back-up power “is very restrictive and reduces combat effectiveness significantly”.^{109[109]} Further, back-up power was also targeted. This is evident as stores of petroleum products that would have powered back-up generators were attacked.^{110[110]} This sheds some light on how the air campaign was so effective in defeating the Iraqi forces within six weeks. Given that many factors played a part in the coalition victory, and that each single factor cannot be isolated in order to assess its individual impact, we cannot be sure how important each factor was, and it is impossible to say for certain the degree to which attacking electric power restricted the Iraqi forces and contributed to the coalition victory. However, the fact that they were defeated so quickly suggests that the damage to electric power did make a significant contribution, in that communications between control and ground forces would have been severely damaged, preventing effective communications as the impact of coalition air power began to take effect.

As far as civilians are concerned, it is not difficult to ascertain that the damage to the power supply had an enormous impact, not just immediately, but for a long time after the conflict. However, this impact upon the civilian population is not so much the result of the air campaign, as the ongoing imposition of sanctions against Iraq. The damage caused by the air campaign could not be properly repaired after the war. The GWAPS states that “the postwar persistence of UN economic sanctions in the face of ongoing Iraqi intransigence after the ceasefire prevented the rapid restoration of electric power in Iraq anticipated by Coalition air planners.”^{111[111]}

^{107[107]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.52.

^{108[108]} Kent D. Johnson, Lt Colonel, USAF (retired), Political-Military Advisor, USAF/RAF Certified Strategic Campaign Planner. Private Communications.

^{109[109]} *ibid.*

^{110[110]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.30.

^{111[111]} Keaney and Cohen, *GWAPS*, vol.II, part II, ch.6, p.42.

Given the UNICEF and WHO figures relating to the increased mortality rate among children,^{112[112]} and that the WHO attributes these deaths, in part, to the continuing imposition of sanctions and the consequent disrepair of electric power and water treatment facilities,^{113[113]} it is clear that the secondary effects of the sanctions have been devastating. The political decision-makers who continue to impose economic sanctions, as opposed to the air campaign planners, must take some responsibility for the long-term suffering of the Iraqi population. It is apparent then, that the bombing of electric power was proportional to the achieved objective, according to my criterion, given that the number of civilian deaths remained very low during the conflict, as the damage to electric power contributed to the swift conclusion of the conflict.

Conclusion

The reasons for attacking electric power were legitimate because to do so apparently restricted the capabilities of the Iraqi forces to fight. Therefore, the damage inflicted was not intended to harm civilians, but to ensure the rapid defeat of the Iraqi forces. Given that electric power was rendered practically defunct, and that within six weeks the coalition air force had defeated Iraqi forces, inflicting only a very small number of civilian casualties, I argue that the unintended effects of attacking electric power were proportional.

Further, the long-term impact of the damage to the infrastructure was neither an intended effect, nor an unintended double effect of the air campaign. The air campaign planners did not envisage that economic sanctions would prevent the restoration of the Iraqi infrastructure in the aftermath of the war. They never intended that economic sanctions would compound the damage caused by the air campaign, resulting in the long-term suffering of the civilian population.

Supporters of the air campaign would argue that the achieved objective – a rapid victory for the allied coalition – outweighed any side-effects. Conversely, those who view the outcome of the bombing campaign from the perspective of the victims of its effects, compounded by sanctions, would argue that the suffering was so great as to be disproportionate to the achieved objective. This demonstrates that the application of the proportionality principle is highly subjective. Based on the evidence summarised above, I conclude that the suffering of the civilian population was disproportionate to the achieved objective – victory for the allied coalition. However, I do not attribute this disproportionality to the actions of the air campaign planners. Conflicts throughout the last century, and notably, World War II, have been followed by a period during which the victors offered assistance to rebuild the countries of those conquered. It is therefore not surprising that the air campaign planners calculated that the same would occur in the aftermath of the Gulf War. However, the sanctions were not lifted, and remain in place ten years after the war, with little modification. The air campaign was devastating, but sanctions have compounded and prolonged its effects, and for this reason, blame for the suffering of the Iraqi civilian population cannot be apportioned so much to the air campaign planners as to the politicians who continue to impose economic sanctions.

^{112[112]} UNICEF and the government of Iraq. *Child and Maternal Mortality Survey 1999: Preliminary Report* <<http://www.unicef.org/reseval>> and the World Health Organisation. “The Health Conditions of the Population in Iraq since the Gulf Crisis” <<http://www.who.int/eha/>>

^{113[113]} World Health Organisation. “The Health Conditions of the Population in Iraq since the Gulf Crisis” <<http://www.who.int/eha/>>

Conclusion and Recommendations

Employing the criteria that I drew from the *jus in bello* principles has enabled a thorough and objective analysis of the implementation of, and the justifications behind, the air campaign. Below I outline my key conclusions, suggestions for further research, and recommendations for future air campaigns.

To a large extent, *Desert Storm* succeeded in satisfying the criteria drawn from the *jus in bello* principles to assess the degree to which non-combatant immunity was respected. The evil effect was not aimed at, as an end, by the air campaign planners. The air campaign planners aimed narrowly at the acceptable effect, and succeeded in limiting the number of civilian casualties during the Gulf War. The weaponry and weapons delivery systems used contributed to the air campaign planners success in limiting the evil effect. Also, the target categories that were drawn up were aimed not at civilians, but at the command, control and leadership of Iraq's military forces, installations upon which the Iraqi forces relied, and weapons' production and storage sites. The air campaign planners attempted to, and succeeded in, limiting the risk to civilians; the low number of civilian fatalities demonstrates this. The only criterion that the air campaign planners failed to fulfil was that which requires that the evil effect is not used as a means to an end. As I demonstrate in chapter II, the GWAPS stated that the targeting of civilians psychologically, and through indirect effects stemming from the striking of other target categories, was regarded as acceptable. Further, the psychological effects of damaging the infrastructure were viewed by some air campaign planners as being of possible benefit to their own ends. Using the evil effect as a means to an end is forbidden under the *jus in bello* principles, and I maintain that exerting psychological pressure upon the Iraqi people that they might oust Saddam Hussein falls short of this requirement.

Thus, three of the four criteria were satisfied by the air campaign planners. In chapter I, I suggested that there might be degrees to which the *jus in bello* criteria could be met. I suggested that if, for instance, three of the criteria were fully satisfied, this might be seen as a greater fulfilment of the *jus in bello* principles than if all of the criteria were only partially met. In the case of *Desert Storm*, had these three criteria only been partially satisfied, the impact upon the civilian population as a direct result of the air campaign would have been much greater. So, whilst one of the criteria was not satisfied, the complete fulfilment of the other three has helped to limit the harm done to civilians. I conclude, therefore, that in the case of *Desert Storm*, the complete fulfilment of three of the criteria amounts to a greater fulfilment of the *jus in bello* principles than if all four had all only been partially satisfied.

With regard to the principles of double effect and proportionality, I chose to look at the damage to electric power in particular, as it is the damage to this, and the compounding effects of economic sanctions, that appears to have had the greatest impact upon the civilian population since the Gulf War. I found that the damage to electric power was intended, as it was seen as being vital to limiting the abilities of the Iraqis to continue with the war. However, in no way were the double effects of this intended by the air campaign planners in the long-term. Attempts were made to ensure that, as far as was practical, non-combatant amenities were not damaged. Whilst this was not always achieved, it was believed that any such damage would be rapidly repaired after the conflict and no significant long-term effects would ensue. I have also shown that attacking electric power was proportional to the achieved objective. The Iraqi forces were defeated in a very short time, in part, because they were forced onto back-up power causing communications, command and control facilities to be quickly restricted. Whilst it is not possible to isolate different factors that contributed to a rapid defeat of Iraqi forces, I suggest that, had electric power not been rendered dysfunctional

so quickly, it is possible that the Gulf War may have lasted much longer than it did, resulting in greater numbers of casualties on all sides.

In light of these findings I suggest that operation *Desert Storm* did, on the whole, satisfy the criteria that I have drawn from the *jus in bello* principles. Operation *Desert Storm* was commended for the small number of immediate civilian deaths that resulted from the campaign, and rightly so. Civilians were not targeted, and measures were taken by the air campaign planners to limit immediate deaths as a direct result of the bombing. Operation *Desert Storm* should now set a precedent for the conduct of air power in future conflicts, in terms of limiting the deaths of civilians as a direct result of air power. It will be interesting to see whether future conflicts involving coalitions of UN forces will be influenced by the positive aspects of operation *Desert Storm*.

I recognise that the damage caused by the air campaign has been compounded by the effects of economic sanctions, and that it is these, rather than the air campaign, that has resulted in certain violations of the rights of the non-combatant population since the Gulf War. The damage to the Iraqi infrastructure was extensive. Electric power was rendered almost totally defunct. Had sanctions not continually been imposed, this damage could have been repaired, and water treatment could have been restored promptly after the war. However, sanctions meant that vital components required to repair the infrastructure, given their dual-use nature, were not permitted to enter the country. Thus the after-action of politicians, rather than the military decisions of the air campaign planners, are largely to blame for the long-term ill effects that have devastated the lives of the Iraqi people.

One might argue that the *jus in bello* principles are insufficient in calling to account the military personnel. I have already shown the principles are open to interpretation, and therefore may be seen as highly subjective. Application of the *jus in bello* principles can justify extensive damage to the infrastructure, if it can be shown that civilian casualties as a direct result of bombing were relatively low, and that precautions were taken to adhere to the principles. One response to my findings might be that it is not difficult for military planners to demonstrate ways in which these principles were satisfied, and that despite this, damage to electricity, and consequently the crippling of water facilities, was still extensive, threatening the livelihoods of Iraqi civilians. Even though it was argued by the planners that they envisaged that the infrastructure would be rapidly re-built, it might be that even this is not sufficient in terms of protecting civilians, and that such extensive damage should never have been inflicted in the first place. If we conclude that this is the case, then this calls for new methods in which to hold to account the actions of military personnel, because the *jus in bello* principles are possibly too easily satisfied.

Nevertheless, even if we conclude that the *jus in bello* principles permit too much, we must not forget the impact of sanctions. Few wars prior to the Gulf War have entailed the imposition of such a repressive sanctions regime that has prevented countries from repairing damage to their infrastructure caused by bombing. I propose that further research is required to determine what would be a more appropriate course of action than sanctions, in the wake of an air campaign which inflicts immense damage upon the infrastructure of a country, if the state's leaders still refuse to comply with UN requirements after the event. If leaders must continually be punished, a more appropriate method of punishment must be found that does not harm innocent civilians. A possible avenue for further research might be to take the criteria that I have drawn from the *jus in bello* principles and apply them to operation *Desert Fox*, air attacks launched by the US and Britain on 16 December 1998, which were allegedly "designed to punish Iraqi non-compliance and 'degrade' what remained of its banned

capabilities.”^{114[114]} In fact these attacks were not authorised by the UN Security Council. Further research could also entail taking the criteria that I have drawn from the *jus in bello* principles and applying them to the imposition of the sanctions regime, in order to assess the degree to which politicians have respected the human rights of Iraqi civilians. This would entail re-phrasing these criteria, but the implication is that the imposition of economic sanctions is akin to an act of war in which civilians are targeted, be that directly or indirectly.

I stress that I cannot lay blame for the long-term suffering of the civilian population wholly at the door of the air campaign planners. The damage to the Iraqi infrastructure as a result of the air campaign, and particularly that meted out upon electric power, was extensive. Coupled with sanctions, this has led to devastating consequences for the Iraqi people. However, had sanctions been at least modified, the vital components required to restore the infrastructure would have been allowed into Iraq, thus helping to prevent many of the subsequent violations of the rights of ordinary Iraqis. I therefore recommend that the UN learns that a precise bombing campaign can be rendered catastrophic by the imposition of sanctions.

^{114[114]} Herring, *Between Iraq and a Hard Place: A Critique of the British Government's Case for UN Economic Sanctions*, p.45.

Bibliography

Lt. Colonel W. Andrews. “Air Power Against An Army – Challenge and Response in CENTAF’s Duel with the Republican Guard”. *CADRE Paper*, (Alabama: Air University Press, Maxwell Air Force Base, February 1998)
<<http://www.research.maxwell.af.mil/Papers/CAD-PAP/andrews.pdf>>

J. Bell. *Doing Your Research Project*. (Buckingham: Open University Press, Third edition, 1999).

R. Betts. “Is Strategy an Illusion?”, *International Security*, vol.25, no.2, (Fall 2000), pp.5-50.

K. Booth. “Ten Flaws of Just War”, in *The Kosovo Tragedy – The Human Rights Dimensions*. (London: Frank Cass Publications, 2001), pp.314-324.

R. Burgess. *Research Methods*. (Surrey: Thomas Nelson and Sons Ltd, 1993).

Campaign Against Sanctions on Iraq (CASI), Website <<http://www.casi.org.uk>>

N. Chomsky. *Rogue States. The Rule of Force in World Affairs*. (London: Pluto Press, 2000).

N. Chomsky. *World Orders Old and New*. (New York: Columbia University Press, 1996 edition).

R. Clark. *The Fire This Time. US War Crimes in the Gulf*. (New York: Thunder’s Mouth Press, 1994).

R. Dannreuther. “The Gulf Conflict: A Political and Strategic Analysis.” *Adelphi Paper 264*, (Oxford: Brassey’s for the International Institute for Strategic Studies, Winter 1991/92).

Defence Intelligence Agency (DIA). *Iraq Water Treatment Vulnerabilities*. (Washington: DIA, 18 January 1991), declassified in 1995, and posted on the Gulflink website
<http://www.gulflink.osd.mil/declassdocs/dia/19950901/950901_511rept_91.html>

N. Finkelstein. *The Rise and Fall of Palestine*. (Minneapolis: Minnesota University Press, 1996).

J. Gory. “‘Just War’ or Just War? The Future(s) of a Tradition”, *Politics*, vol.20, no.3, (2000) pp. 177-182.

Greenpeace International. *On Impact: Modern Warfare and the Environment – A Case Study of the Gulf War.* (London: Greenpeace International, 1991), summarized in

N. Finkelstein. *The Rise and Fall of Palestine.* (Minneapolis: Minnesota University Press, 1996).

Gulflink Website. Collection of recently declassified military and intelligence documents concerning Gulf War illnesses <<http://www.gulflink.osd.mil>>

E. Herring. “Between Iraq and a Hard Place: A Critique of the British Government’s Case for UN Economic Sanctions”. (Forthcoming in *Review of International Studies*, January 2002, vol.28, no.1), pp.39-56.

E. Herring. *Danger and Opportunity.* (Manchester: Manchester University Press, 1995).

T. Keaney and E. Cohen (Director). *Gulf War Air Power Surveys (GWAPS).* (Washington DC, John’s Hopkins University and the US Air Force, 1993), Volume II, Part II, chs 6 and 7
<<http://www.au.af.mil/au/awc/awcgate/awc-hist.htm#gulf>>

Lt. Colonel J. McCausland. “The Gulf Conflict: A Military Analysis”. *Adelphi Paper 282*, (Oxford: Brassey’s for the International Institute for Strategic Studies, November 1993).

General M. McPeak. *Briefing Transcript*, quoted in **Middle East Watch**, *Needless Deaths in the Gulf War*, (New York: Middle East Watch, 1991), p.114.

Middle East Watch. *Needless Deaths in the Gulf War.* (New York: Middle East Watch, 1991).

T. Nagy. *The Role of “Iraq Water Treatment Vulnerabilities” in Halting One Genocide and Preventing Others.* Paper given at the fourth biennial conference of the Association of Genocide Scholars, (Minneapolis, 12 June 2001).

T. Nagy. “The Secret Behind the Sanctions. How the U.S. Intentionally Destroyed Iraq’s Water Supply”, *The Progressive*, (September 2001)
<<http://www.progressive.org/0801issue/nagy0901.html>>

T. Nardin and D. Mapel. (eds). *Traditions of International Ethics.* (Cambridge: Cambridge University Press, 1992)

C. Navari. “Intervention, Non-Intervention and the Construction of the State”, in **I. Forbes and M. Hoffman**, *Political Theory, International Relations and the Ethics of Intervention*, (London: Macmillan Press, 1993), ch. 4, pp.43-59.

J. Nye and R. Smith. *After the Storm. Lessons from the Gulf War.* (London: Madison Books, 1992)

J. Perez de Cuellar. Report S/22366 to the United Nations Security Council, detailing the findings of the mission undertaken by Under-Secretary-General Martti Ahtisaari to assess the humanitarian needs arising in Iraq in the aftermath of the Gulf War. (New York: UN Office of the Iraq Programme - OIP, 20 March 1991) <<http://www.un.org/depts/oip/reports>>

J. Pilger. Paying the Price: Killing the Children of Iraq. (Television documentary, broadcast on ITV on 6 March 2000).

J. Pilger's Website. Selected articles and updates on the humanitarian situation in Iraq since the Gulf War <<http://pilger.carlton.com/iraq/articles/>>

R. Plant. "The Justifications for Intervention: Needs Before Contexts", in I. Forbes and M. Hoffman, Political Theory, International Relations and the Ethics of Intervention, (London: MacMillan Press, 1993), ch.8.

P. Ramsey. The Just War. Force and Political Responsibility. (New York: University Press of America, 1983 edition).

S. Renshon. (ed.) The Political Psychology of the Gulf War. (Pittsburgh: University of Pittsburgh Press, 1993).

Colonel R. Reynolds. Heart of the Storm. The Genesis of the Air Campaign Against Iraq. (Alabama: Air University Press, Maxwell Airforce Base, 1995).

M. Shaw. Critique of J. Pilger's documentary: "Paying the Price: Killing the Children of Iraq" <<http://www.martinshaw.org/iraq/.htm>>

H. Sidgwick, summarised in Walzer, Just and Unjust Wars, p.129.

C. Thomas. "The Pragmatic Case Against Intervention", in **I. Forbes and M. Hoffman**, Political Theory, International Relations and the Ethics of Intervention, (London: Macmillan Press, 1993), ch. 7, pp.91-101.

R. Tucker. The Just War. (Baltimore: The John's Hopkins Press, 1960).

United Nations Children's Fund (UNICEF) and the Government of Iraq. Child and Maternal Mortality Survey 1991: Preliminary Report. (New York: UNICEF, 1991) <<http://www.unicef.org/reseval>>

United Nations Children's Fund (UNICEF). Country Statistics: Iraq. (New York: UNICEF, 26 December 2000) <<http://www.unicef.org/statis/Country.Page81.html>>

United Nations Office of the Iraq Programme Website. (OIP) <<http://www.un.org/depts/oip/>>

United Nations Report. Annex II of S/1999/356. "Report of the Second Panel Established Pursuant to the Note by the President of the Security Council of 30 January 1999 (S/1999/100) concerning the current humanitarian situation in Iraq."

(New York: UN Office of the Iraq Programme - OIP, 30 March 1999)
<<http://www.un.org/Depts/oip/reports>>

US Air Force. *White Paper: Air Force Performance in Desert Storm.* Quoted in **Middle East Watch,** *Needless Deaths in the Gulf War.* (New York: Human Rights Watch, 1991), pp.113-114.

Voices in the Wilderness. *Strangle Holds.* (Oxford: Voices in the Wilderness, Newsletter, 16 April 2001).

M. Walzer. *Just and Unjust Wars.* (New York: Basic Books, 1977, Third Edition, 2000).

World Health Organisation (WHO). *The Health Conditions of the Population in Iraq Since the Gulf Crisis.* (New York: World Health Organisation, March 1996)
<<http://www.who.int/eha/>>