

Birkbeck

UNIVERSITY OF LONDON

School of Social Sciences, History and Philosophy

Department of Geography, Environment and Development Studies

The World Formula One Championship and North America: The Development of a Globalized Industrial Sports Complex?

R. Cary Capparelli

Dissertation submitted for the degree of Doctor of Philosophy

This dissertation exclusively is my own research and design.

The dissertation does not exceed 100,000 words in accordance to the rules and regulations of Birkbeck College, University of London.

R Cary Capparelli

R. Cary Capparelli

Acknowledgements

The initial pursuit of this doctoral degree was the idea of Dr. Musa Qutub. Dr. Qutub was my adviser for a Master of Arts degree in Geography at Northeastern Illinois University in Chicago. It was his persistence and confidence in me that began this academic challenge. He remained an active adviser, in an unofficial capacity, throughout this quest.

My inspiration, over time, became Dr. Luigi Drammis. I never met him, but he was my father's grandfather on his mother's side; my great grandfather. In about 1890, Dr. Drammis emigrated from Italy to the United States as a pharmacist. In 1916, he became a medical doctor. This was the beginning of more medical doctors and PhDs in my extended family.

It is important to acknowledge my great uncle Louis Capparelli who was the first Italian American Commander in the Chicago Police Department. Years ago, his generosity contributed greatly to my undergraduate and graduate education.

This accomplishment would not have been possible without my admission to the Birkbeck College, University of London programme by the then department chair, Dr. Andrew Jones. Early on, he convinced me that a degree from the University of London is as good as a degree from Harvard University. After leaving for another university, Dr. Jones remained committed to the completion of my degree and I am forever grateful.

Upon Dr. Jones' departure, Dr. Rosie Cox selflessly agreed to act as my official adviser. She provided the guidance and support that was instrumental to reach the conclusion of the PhD, which is most appreciated.

This research would not have been possible without the assistance of the many experts interviewed, individuals polled, and other contributing subjects. Their participation was integral to its successful result.

Lastly, and most importantly, this PhD is dedicated entirely to my parents, who provided me with unconditional love and the ability to pursue education.

Abstract

This research seeks to recognize the World Formula One Championship as a global industrial sports complex through both its direct and indirect connections with North America. The study analyses the visibly linked and imperceptible separate commercial, cultural, political, and technological inputs from data retrieved from several accepted disciplines that can be prejudiced based on the sport's respective nationalism.

The study examines the entangled but corresponding economic and social engines that constitute the global framework of the World Formula One Championship. It does this by examining those commercial, cultural, political, and technological dimensions that form this autonomous industrial sports complex.

This thesis presents research that scrutinizes how the World Formula One Championship cannot be understood as strictly a European enterprise and discovers intricate global relationships, particularly North American contributions, which are often disregarded, despite its historical existence on the continent and the more recent presence of the sport in the United States. These connections include a vast array of shared relationships that reveals how the World Formula One Championship is a globalized and evolving industrial sports complex of its own significance. Competition from other major league sports, lack of media coverage, and a small, isolated audience has caused the World Formula One Championship to be misunderstood in much of North America. The verified associations that materialize in this study demonstrate its importance and influence as an all-encompassing business and worldwide sport, in fact, one of three Mega Sports.

List of Acronyms

ACCUS	Automobile Competition Committee of the United States
AP	Alpha Prema
ASN	Authorite Sportive Nationale
ASN Canada FIA	Authorite Sportive Nationale Canada FIA
CART	Championship Auto Racing Teams
CVC	CVC Capital Partners Group
EU	European Union
FIA	Federation Internationale du Automobile
FIFA	Federation de Internationale Football Association
FISA	Federation Internationale du Sport Automobile
FOA	Formula One Administration
FOCA	Formula One Constructors Association
FODA	Formula One Drivers Association
FOG	Formula One Group
FOH	Formula One Holdings Limited
FOM	Formula One Management

FOMA	Formula One Management and Administration
FOP	Formula One Promotions
FOPA	Formula One Promotions and Administration
FOTA	Formula One Teams Association
FOWC	Formula One World Championship
GPDC	Grand Prix Driver's Committee
GPN	Global Production Networks
IOC	International Olympic Committee
MLB	Major League Baseball
NFL	National Football League
NHL	National Hockey League
OMDAI	Organizacion Mexicana de Deporte Automovilistico
PGA	Professional Golf Association
SCCA	Sports Car Club of America
USF3	United States Formula Three Championship
WFOC	World Formula One Championship
WMC	World Motorsport Counsel

List of WFOC Expert Interviewees

As used in the Methodology and elsewhere

No.	Nationality	Profession
001	Canadian	Active high-level FIA Canada & FIA executive
002	American	Retired high-level SCCA executive (deceased)
003	American	Active WFOC journalist
004	British	Active WFOC journalist
005	American	Former high-level corporate executive
006	Canadian	Active WFOC promoter
007	American	Active WFOC journalist
008	American	Active WFOC television personality
009	Singaporean	Active mid-level government official
010	Mexican	Retired Indy-car driver & active WFOC driver manager
011	American	Retired high-level ACCUS & FIA official
012	British	Former WFOC team engineer
013	American	Former high-level corporate executive
014	Mexican	Active mid-level OMDAI executive
015	British	Former WFOC team engineer
016	Italian	Active WFOC team engineer
017	British	Former WFOC team engineer

018	Belgian	Former WFOC driver & GPDC executive
019	British	Active mid-level corporate executive
020	Mexican	Active high-level OMDAI & FIA executive and promoter
021	American	Active WFOC journalist (deceased)
022	Canadian	Active mid-level government official
023	American	Active high-level corporate executive & engineer
024	American	Active high-level ACCUS & FIA official
025	American	Active high-level corporate executive & engineer
026	Belgian	Active mid-level corporate executive
027	American	Active mid-level corporate executive & engineer
028	Canadian	Active WFOC journalist
029	Mexican	Active WFOC television personality
030	Italian	Active WFOC journalist
031	American	Retired high-level corporate executive & engineer
032	American	Former WFOC driver
033	British	Former WFOC driver
034	American	Mid-level government official

List of Tables and Figures

Chart 1:	WFOC: Geo Framework	62
Chart 2:	WFOC: Sport or Business?	66
Chart 3:	WFOC: Revenue	93
Chart 4:	WFOC: Expenditures	94
Chart 5:	WFOC: Relationship Structure	98
Chart 6:	WFOC: Business Structure	123
Chart 7:	WFOC: Profitability	125
Chart 8:	Present North American WFOC Penetration	266

Acknowledgements

Abstract

List of Acronyms

List of WFOC Expert Interviewees

List of Tables and Figures

Contents

Chapter 1: Introduction to the World Formula One Championship and North America: The Development of a Globalized Industrial Sport Complex?	15
1.1 Introduction	15
1.2 The Historical Globalization of the WFOC	16
1.3 Theoretical Approaches to Globalization and the WFOC	17
1.4 Research Questions	18
1.4.1 Purpose of the Investigation	20
1.5 The Structure of the Thesis	21
Chapter 2: Globalization, Sport, and the Development of the World Formula One Championship in North America	24
2.1 Defining Globalization	24
2.1.1 Economic Globalization	31
2.1.2 Cultural Globalization	33
2.1.3 Challenges to Globalization Theories	35
2.2 Global Production Networks	37
2.2.1 The Concept of a GPN	37
2.2.2 World Auto Manufacturing GPNs	38
2.2.3 A Global Automotive Industrial Complex?	38
2.2.4 The WFOC as a GPN	39
2.3 The Globalization of Sport	40

2.3.1	Global (Word) Sports	40
2.3.2	Comparing World Sports	42
2.3.3	Statistical Analysis of World Sport	47
2.3.4	Global (Mega) Sports and Events	49
2.3.5	Analysing Mega Sport	51
2.3.6	The Reach and Role of Mega Sport	
	Global Media	53
2.3.7	Disproportionate Geographies of	
	Global Sports	54
2.3.8	Sport, National Identity and	
	Cultural Globalization	56
2.3.9	The Emergence of Global Industrial Sports	
	Complexes	59
2.4	The World Formula One Championship	59
2.4.1	Historical Growth and Development	63
2.4.2	The Contemporary WFOC	64
2.4.3	The WFOC and the Global Automotive	
	Industry	67
2.4.4	The WFOC and the Global Media	70
2.5	Conclusions	71
 Chapter 3: Methodology		 72
3.1	Research Design	72
	3.1.1 Informed Research	72
	3.1.2 Groups	74
3.2	The Mixed Methods Approach	74
	3.2.1 Quantitative Methods	75
	3.2.2 Qualitative Methods	77
3.3	Pilot Study	80
3.4	Limitations	83
	3.4.1 Bias and Conclusion	85
 Chapter 4: The World Formula One Championship Administration and Its State of Affairs with Political Structures		 88
4.1	A Secretive Business	88
4.2	Complicated Relationships	95
4.3	Inter-Connected Associations	101
4.4	Identifying Control of the WFOC Administration	102

4.4.1	Global Monopoly	103
4.4.2	Oligopoly by Sector	105
4.4.3	Teams and their Sovereignty	107
4.4.4	The WFOC Compared to the World Cup and the Olympics	108
4.5	The Role of Governments	110
4.5.1	Tourism	116
4.6	Administering the WFOC	121
4.6.1	Is the WFOC a Sport or a Business?	126
4.6.2	The WFOC Administration's Inter-Connectedness and Relationships with North America	129
4.7	The Internal Politics of the WFOC	134
4.7.1	The Connected Politics of the FIA	134
4.8	The North American Case	135
4.9	Summary and Conclusions	139

Chapter 5: The Globalized Industrial Complex that Underpins the WFOC 143

5.1	The WFOC and the (Global) Automotive Industry	143
5.1.1	Commercial History	144
5.1.2	Contemporary Commercial and Technological Entanglements	145
5.1.3	Relating the Auto Industry and the WFOC as a GPN	146
5.2	WFOC and Global Corporations	147
5.2.1	Advertising	152
5.2.2	Corporate Entertainment	153
5.2.3	Marketing	154
5.2.4	Media; Including Television	154
5.2.5	Merchandising	155
5.2.6	Sales	155
5.2.7	Trade	155
5.3	WFOC's Commercialism and Inter-Connectedness with North America	156
5.4	The WFOC and Innovation and Technology	166
5.4.1	Global Technology	171
5.4.2	Dedicated Technology	173
5.4.3	Auto Industry Technologies	174
5.4.4	WFOC Technology	175
5.4.5	Technical Partnerships	177

5.5	Types of WFOC Industries that Inter-Connect with North America	179
5.5.1	Product Safety	180
5.5.2	Computers, Materials, Metals and Personnel	184
5.5.3	Energy and Design	196
5.6	WFOC Technology's Inter-Connectedness with North America	199
5.6.1	Technologies Transforming into Technological Products	200
5.7	Summary and Conclusions	206
 Chapter 6: The Role of Culture and National Identity in the Globalization of the WFOC		209
6.1	Culture and the WFOC	209
6.2	The Culture of the WFOC as a Global Culture	210
6.2.1	Ethnic Connectivity	212
6.2.2	Nationalism, Patriotism and Passion	215
6.3	The Role of Identity in Shaping the WFOC Fan Base in North America	219
6.3.1	Outcome from the Questionnaires	220
6.4	Nationalism and Patriotism in the WFOC	224
6.5	Observations of WFOC Nationalism	226
6.6	Identification and Nationalism of the WFOC Fan Base in North America	241
6.7	Confusing Culture and Nationalism	241
6.8	Summary and Conclusions	245
 Chapter 7: The North American Equation		248
7.1	Criteria Supporting North America	248
7.1.1	The Marketplace	249
7.1.2	Participating History	250
7.1.3	Television Penetration and Media	251
7.1.4	Suppliers of Technology	254
7.1.5	Corporate Sponsors	255
7.2	The Struggle for Entry into North America	257
7.2.1	North American Detractors	259
7.2.2	The Politics of WFOC Developments in North America	260

7.3	Summary and Conclusions	263
Chapter 8:	Conclusion	265
8.1	The Present	265
	8.1.1 A Globalized Industrial Sports Complex?	267
	8.1.2 Validating North America	272
8.2	The Future	274
	8.2.1 Closing Remarks	276
	8.2.2 Final Result	277
	8.2.3 Epilogue	278
Appendices		280
Bibliography		317

Chapter 1: Introduction to the World Formula One Championship and North America: The Development of a Globalized Industrial Sports Complex?

Chapter 1 first provides the reader with a foundation on world sport and the differences between world sports, World Sport and Mega Sport. It briefly alludes to various analyses and acknowledges the World Formula One Championship as an elusive Mega Sport through its historical significance, and outlines how theoretical questioning and arguments will substantiate its globalized status via its commercialized, cultural and political implications by presenting an enhanced structure of the thesis.

1.1 Introduction

Perhaps, to the vast majority of the world, the World Formula One Championship (WFOC) is simply one of about 450 organized sports played in the world today (Top End Sports 2014a). Much of that populace, because of its global stature, may consider it a World Sport, a term reserved for major sports with various degrees of planetary penetration. Some, those with an extensive knowledge of World Sport, may consider it one of just several Mega Sports. This research asked 25 individuals, with no ties to motor racing, if the WFOC was a sport, a business, or something else, and overwhelming majority of 19 responded that it was a sport and 6 clearly did not know and/or, or more likely, had no familiarity with the WFOC. It would be an accepted assumption that most people think of the WFOC as plainly a sport, on some level, only.

However, to its ownership, management, its participants in its many capacities, the governments it plays to, the corporations that sponsor it, the technologies that advance it, and at least some of its extensive fan base, the WFOC is much more than a sport. Although the WFOC remains a sport, realistically a World Sport, it is in actuality a trans-national business.

This research seeks to not only justify the WFOC as a World Sport and a trans-national business but to provide evidence by empirical data, analysis, and theorizing that the WFOC is of a more considerable foundation and significance. The application of mostly qualitative interpretations, complemented by certain

quantitative explanations, seeks to offer a distinct validation that the WFOC is one of only three Mega Sports in the world, but also an autonomous trans-national business in its own regard; a globalized industrial sports complex with all the associated connected and disconnected parts to empower it with such a status and with the cause and effect of a specific geographical place. Essentially, in this thesis, this refers to the purpose and placement of North America in a global Mega Sport's trans-national business affairs.

1.2 The Historical Globalization of the WFOC

Nicholas Pardini (2008) comments, "Throughout the twenty-first century, globalization has spread across economy, political relations, people, and popular culture all over the planet". The relevance of this study can be appreciated when Pardini further observes, "The world of sports has also been radically globalized during the same period of time". The World Formula One Championship (WFOC) has proliferated from an important component of this occurrence into what this thesis will term a 'globalized industrial sports complex'. The WFOC is a highly selective group that can be categorized as its own developed globalized industrial sports complex, with the WFOC emerging on the same world stage as the Olympics and World Cup (Pardini, 2008).

Some world economic historians, such as Osterhammel and Peterson (2005), may argue that globalization is a contemporary phenomenon rather than one that stretches for several centuries or even millennia. O'Rourke and Williamson (2000) suggest that the world economy was well-integrated by 1913. This timing coincides with the European Grand Prix Racing series, the forerunner to the WFOC, originating in the 1920s. It gives the impression that the founders of Grand Prix racing fully understood the economic perspective of its product and its ability to permeate comprehensive markets.

O'Rourke and Williamson (2000) stated, "Globalization was a defining term of the 1990s". This statement coincides well with the WFOC's conventional productivity. While the WFOC made some economic strides during the 1980s, it achieved massive growth in the 1990s. The trans-national WFOC that is enjoyed today is the result of that immense economic activity during the 1990s which

reconstructed the WFOC into the billion-dollar business that it is today. That global expansion and economic growth has continued through the first decade of the new millennium and beyond.

Three spatial relationships with historical dimensions lie at the centre of this study. The first is the word 'world', as in the World Formula One Championship. World, in this instance, essentially means its ability to penetrate its total marketplace or its universe. Second is the word 'North America', as in the geographical continent which this research targets as its place of interest. Lastly is the comprehensive neologism 'globalized'. Globalized allows this research to fall under one spatial umbrella. In unison, these three spatial relationships found in the title of this thesis identify and determine the understanding of the research and its demonstrated results.

1.3 Theoretical Approaches to Globalization and the WFOC

From the onset of this thesis, two predominant theoretical methods surface to support the viewpoint that the WFOC is an autonomous globalized industrial sports complex. The first idea is the WFOC's global European influence and the second is its globalization with local consideration. All other theories presented in this study arise from and are consequences of these two concepts.

Delanty and Rumford (2005) would refer to the initial theory as Europeanization. Europeanization becomes applicable to the WFOC because initially it adopted a large number of European identities within its own culture, many still existing. These European implications in the WFOC include, but are not limited to, various cultural influences, commercial methodologies, administrative and political behaviour, and media conduct.

The WFOC, which visits up to 20 nations on 6 continents annually, may be the paramount model of a major world sport utilizing the concept of 'glocalization' to realize its desired aspirations. The objective must be to penetrate markets that can afford the financial commitment that can capitalize on the benefits the WFOC can bring to that place. It must constantly adjust to different geographical zones with different cultures. The European influences or 'innuendos', as described by Delanty and Rumford (2005), of varying magnitudes provide an insulation that

produces a distinct connectivity between Europeanization and the concept of globalization by localization. Giulianotti and Robertson's (2007) study of Scottish expat football nationalism displayed in North America or Scherer and Jackson's (2010) local and global marketing contrast study with Adidas and New Zealand's All Blacks rugby team are two prime examples of how these concepts and connectivity operate together. Such instances demonstrate the transfer of a European model to another distant place to produce globalization by achieving worldwide notoriety. This analogy can be used about how European football (soccer) has transcended into a world sport, how many sports, both summer and winter, in the Olympics originated in Europe and became global, and certainly how the World Formula One Championship has integrated itself from Europe into the world. Later this research will analyse the composition of world sports, World Sports and Mega Sports and the transfer of sports from their point of origin to the world stage.

1.4 Research Questions

Research questions are the control centre of a social science investigation as the focal point to bring about an organized statement. In this inquiry, the research questions were presented to gain both quantitative and qualitative knowledge. Research questions revolving around the quantitative analysis were limited to the WFOC fan base, as this method was best to achieve that specific goal. Qualitative research questions targeted the many intricate professional parts of the WFOC to acquire an abundance of high-value information to substantiate this report.

The quantitative questions to the fan base aimed to establish the WFOC marketplace. The qualitative questions, presented to an array of WFOC experts in a myriad of capacities, were first framed to differentiate the WFOC, as a Mega Sport, from other sports and World Sports. The separation further allowed qualitative questioning of the same subjects to determine the commercial, culture, political, and technological importance that will ultimately substantiate the WFOC as a globalized industrial sports complex.

The bulk of this research is reliant upon that qualitative questioning of expert subjects, because they represent the numerous aspects of the WFOC that are not apparent to the vast majority of its fan base and beyond. The research questions that command a more specific answer were directed to the respective group with a circumstantial inquiry and often with follow-up questions to assure completeness. The most obvious continuous conjunction of all of the research groups was found when discussing the relationships with nationalism. Nationalism materialized as an eminent by-product of much of the interrogation.

It is fundamental to this research to set a course that will accurately determine its outcome. This is mandatory to a successful research project. The mixed methods used explicitly seek to interpret and systematically answer the three most substantiating questions:

- As a Mega Sport, what constitutes the World Formula One Championship as an industrial sports complex?
- How do political structures, commercialism, and culture act in the World Formula One Championship industrial sports complex?
- How is North America factored into the globalized World Formula One Championship?

The aim of this trio of questions is designed to make clear: 1) the definition and equation of the WFOC as a sport, World Sport, and the Mega Sport and industrial sports complex that it is, 2) to identify the specific components that comprises the makeup of this particular industrial sports complex, and 3) how and why North America is relevant and of high value to the WFOC. These three statements will boldly support the main theory that the WFOC is a self-governing and self-sufficient globalized industrial supports complex that is influenced and implicated by North America.

It is reiterated here that the questioning relies generally on its qualitative interpretations except for quantitative analysis of cultural investigations.

This main theory will be explained and supported by the essential components of the argument: commercial, cultural and political, but not necessarily in that order. This will allow the structure of the thesis to provide the rational outline and evidence to answer the questions.

1.4.1 Purpose of the Investigation

Reiterating its importance, the objective of the research questions is to clearly and fully understand the defined mechanisms of the WFOC as a global industrial sports complex intricately complicated with North America.

The research questions were designed to acquire knowledge about five separate geographical dimensions: commercial, cultural, industrial, political, and technological and their related sub-categories, thus the focal area. The industrial and technological aspects are covered under the commercial area in this research. This was best accomplished by interviewing experts in those areas and with knowledge gained by direct or indirect observation due to one's related circumstances. It is reasonable to assume a public relations person for an automotive corporation will understand its applied technologies or a government employee to understand cultural implications in their governing region, for example. This type of concept was sometimes applied to gain information.

It was determined that the best-organized solution to these potentially fragmented sub-sections was to sometimes differentiate the interviewees by nationality first as opposed to sector of professional occupation or subject matter (which was also added), or at least be inclusive of nationality when appropriate. This was done to underscore both the interpretation by North American experts in and of itself and the interpretation of North America by experts from other places. All sub-sections in this research follow this concept. Each question asked of the interviewee, although it may have a slight variance, is shown verbatim to allow for clarification and comprehension.

The questions were designed around the themed criteria of the three empirical chapters: political, commercial, and cultural (*the order as presented in the thesis*). As each critical theme was addressed, a thorough query evolved that essentially covered all critical topics to produce explanations. The path of questioning was expected and easy to follow. Most importantly, it was complete and proceeded to a logical conclusion.

The three inquisitive questions in the previous section potentially opened up a mire of other cross examinations that allowed a continued flow of connected

information including (*in alphabetical order*): concept, control, functionality, monopolies, oligopolies, origins, sovereignty, value, and other inputs.

1.5 The Structure of the Thesis

This initial chapter is self-explanatory, offering an introduction to the subject, the WFOC, and the respective research on a globalized industrial sports complex, by presenting the origin and history, discussing the presented theory, and examining the types of questions that will provide the empirical data.

The second chapter is the nucleus of the comprehension of the research as it concentrates on the variable definitions of globalization used in the report, the globalization of sport, and the emergence and development of the WFOC. In this chapter we distinguish sports, World Sports and Mega Sports and the position of the WFOC and related themes (cultural, economic, historical, etc.) in the globalized process through theoretical argument. Comparisons with other sports on various plateaus suggest the WFOC as a premier global sport. The first qualitative questions are introduced in this core section that interprets the elaborate composition of the modern definition of globalization, in contrast to traditional definitions, and its lineal relationships with sports, World Sports, and, in particular, the WFOC. The multiple definitions of globalization are provided not to cause confusion but to offer the many scenarios that may be apropos to the WFOC. The generally accepted definition of globalization, while consistently pertinent to this research, takes on a new dynamic reach that requires an expanded and specific application in this thesis, meaning a globalized industrial sports complex.

The following chapter discusses the methodology used to collect the data analysed in this thesis by concentrating on the two types of knowledge, quantitative and qualitative, employed in this research, its strategy, and methods engaged. This illustrates how we examined the WFCO's geographical place in North America and its position in the globalized industrial sports complex through a mixed methods approach using both quantitative and qualitative analysis. The questionnaires utilized in this research are introduced first as the sole quantitative investigations. However, this methodology is heavily weighted towards qualitative analysis, as it later scrutinizes the three distinct emerging parts of the WFOC in North America

and the relative parts expounding a globalized industrial sports complex: a) the various and complicated political structures, b) the commercialized sector, including corporate marketing and transferred technologies, and c) the intricate cultural complexities including the media and fan-based nationalism, through in-depth interviews with respective major actors and other empirical data to capture qualitative information for analysis and determination. Limitations and bias are discussed to conclude this portion of the thesis.

The fourth chapter undertakes additional qualitative examination by breaking down the composition of the contemporary WFOC into its various and complicated political structures, which include the WFOC administration, other related bodies of motorsport administration, and foreign governments. Secretive business, complicated relationships, and inter-connected associations are introduced to this research at this juncture, along with monopolies, oligopolies and connected role-playing. Given these perplexities, there is significant potential to provoke difficult exchanges of views. The debate of politics, within the WFOC administration and outside its boundaries, is fundamental to the basis of its operation. This, the most previously unrevealed knowledge in the thesis, is gained and validated through interviews with and observations of those with close relationships to the WFOC.

In the next chapter, the supporting foundation of the WFOC, the globalized industrial sports complex, is identified, collected and then discussed. The qualitative variables related to the commercialized sector include its corporate structure, marketing, and its kindred family of communication disciplines, other partnerships, and transferred technologies on both the localized and trans-national levels. The commercialized segment is the area most responsible for the direct economic success of the whole entity. The selected information is acquired through interviews and observations material to these precise disciplines and topics to further strengthen this section of the thesis by providing important endorsements of a pivotal, financially driven category.

Chapter 6 targets, taking a mixed approach, both quantitative and qualitative variables of cultural implications and national identity found in the WFOC as a source of information. Culture and national identity offer the most diversity in this thesis, cultivating a high level of prejudiced zeal. The questionnaires conducted in

Montreal and Austin gave the research a perception of the population being considered and personal to its evaluation. The results of the two questionnaires are reported in this section and other components of the empirical data are retrieved via interview and observation, pivoting on the nationalism that stems from the fan base's patriotism, the media, corporate involvement, and other means of display and pride found particularly in North America.

The penultimate chapter addresses the North American equation in this research by answering the question: *Is North America a relevant factor to the World Formula One Championship?* Here the research sets out to prove that the political consequences, commercialism, culture, national identities, technologies, and other values are prevalent and outstanding. It shows that North America may lag behind in some areas but prevails as a leader in some distinct sectors. It signifies its existence and importance as a relevant pertinent point in the question. All of the integrated knowledge previously presented comes together to form the first final and logical prediction based on the implications studied, presenting various situations and circumstances surrounding the North American claim to inclusiveness to the WFOC. In essence, this chapter sets up and proves the intended result.

The final chapter converges upon a second and absolute conclusion of the final research question: *Is the World Formula One Championship a globalized industrial sports complex?* All of the integrated knowledge previously presented comes together to form the next final and logical prediction based on the implications studied. One objective of this thesis is to decipher the three geo-factored dominant parts of the WFOC as an industrial sports complex and determine its role through qualitative methods that are determined in this culmination.

Chapter 2: Globalization, Sport, and the Development of the World Formula One Championship in North America

This chapter systematically provides the reader with broad interpretations of key elements found in the structure of the thesis that will provide its material themes, expounding heavily on globalization in general, examining possible connections to Global Production Networks, breaking down the globalization of all sport, and finally the growth and development of the WFOC (as a globalized industrial sports complex). This leads into a discussion of the relevant research questions of this thesis.

2.1 Defining Globalization

This research manipulates multiple definitions to define globalization and its compatibility with this thesis. More than one description of globalization is applicable, because as Zygmunt Bauman argues, it is used in numerous different contexts (Bauman cited in Jones 2006: 1). This is particularly valid when attempting to apply its definition to a complicated pan-global structure comparable to the Olympics, World Cup or WFOC.

Jones's definition that globalization is "the growing interconnectedness and interrelatedness of all aspects of society" (Jones 2006: 2) offers a pertinent starting point that allows a definition to be embellished and ultimately prove to be a select definition applicable to all world sport or exclusive to the WFOC. It will be evident that the research will continually fall back on this aspect as a foundation of understanding the connections asserted in the thesis.

However, as Jones (2006) indicated, the very utterance of 'globalization' projects can go far beyond simplistic ideas. The word or term globalization can be defined in numerous ways, extending to some highly outlandish ideas, as will be highlighted in a chart later in this chapter. Jones (2006) acknowledges the confusion by defining globalization as being possibly indefinable:

"The idea of producing a dictionary of globalization may seem a strange undertaking. The concept is, after all, just one word. Yet many social scientific commentators have argued that globalization – as a

concept – has become what sociologist Raymond Williams calls a keyword. Within academic thought, its significance is such that it is already at the head of a developing discipline called ‘globalization studies’. More importantly, however, beyond academic and policy discussions it is now everywhere in daily life: in newspapers on television, in advertisements, and even rock music lyrics. And what is perhaps most remarkable is the speed with which this has happened. This word, that hardly a soul outside the academic world used fifteen years ago, supposedly captures one of the most important changes occurring in every society in every country on the planet, a no one can escape its influence. Everyone has heard it.” (Jones 2006: 1)

Confusion in the understanding of the WFOC as an industrial sports complex is probably indefinable to the vast global population. In this research, to qualify its relevancy, defining globalization seeks to and needs to harmonize with the concept of an industrial sports complex.

Anthony Giddens defines globalization as “the intensification of worldwide social relations”, which, in effect, connect scattered localities in such a way that local happenings are formed by occurrences in far-away places and vice versa (Giddens 1990). David Held et al. (1999) define globalization as a process or set of processes which embodies a transformation in the spatial organization of social relations and proceedings. This becomes further assessed in terms of their extensity, intensity, velocity and impact that generate transcontinental or inter-regional circulation and networks of different potency (Held, McGrew, Goldblatt and Perraton 1999). Intensification and transformation become the key terms as the definition of globalization becomes specialized into its interpretation used here. Although intricate, these terms are distinct, creating the necessity for inclusion in the title of this research because of its exclusiveness.

So, it could be said that the name or expression ‘globalization’ has transcended from fashionable jargon into an endorsed academic concept in a relatively short period. This modern accepted term, the theoretical word, is what is contemplated when used in commercial, cultural, economic, industrial, social, and technological engineering, consistent in definition yet varying in opinion.

There are a multitude of meanings for the word globalization. Some are general descriptions, while others may have a linked expression to a particular subject, e.g., world sport or the WFOC. The various meanings, comparisons, and opinions are numerous but work consistently with the themes of this research.

While it may be absurd to produce a dictionary to define globalization, Al-Rodhan and Stoudmann (2006) collected 112 definitions of globalization from different experts and scholars to somehow determine its meaning. Their comprehensive overview offers some interesting concurrences, disagreements and comparisons. This research decided it was valuable to consider some of these definitions.

Expert Definitions of Globalization
Collected by Al-Rodhan and Stoudmann

General Descriptions of Globalization:

- Albrow (1990) says globalization is, “All those processes by which the peoples of the world are incorporated into a single world society.”
- Harris (1995) is more geographical and sociological with the conception that, “Globalization refers in general to the worldwide integration of humanity and the compression of both the temporal and spatial dimensions of planet-wide interaction.”
- Waters (1995) agrees, stating globalization is, “A social process in which the constraints of geography on social and cultural arrangements recede and in which people become increasingly aware that they are receding.”

Expressions of Globalization More Applicable to this Research:

- Holm and Sorenson (1995) call globalization, “The intensification of economic, political, social and cultural relations across borders.”
- Spich (1995) thinks, “Globalization is a conceptualization of the international political economy which suggests and believes essentially that all

economic activity, whether local, regional or national, must be conducted within a perspective and attitude that constantly is global and worldwide in its scope.”

- Scholte (1996) calls globalization, “An ensemble of developments that make the world a single place, changing the meaning and importance of distance and national identity in world affairs.”

- Modelski (1998) offers, “Globalization is a process along four dimensions: economic globalization, formation of world opinion, democratization, and political globalization.”

- Dicken (1992) says “Globalization is qualitatively different from internationalization ... it represents a more advanced and complex form of internationalization which implies a degree of functional integration between internationally dispersed economic activities.”

(Albrow, Harris, Waters, Holm and Sorenson, Spich, Scholte, Modelski, and Dicken cited in Al-Rodhan and Stoudmann 2006: 9-19).

In consideration of the abundant diverse explanations of globalization, Al-Rodhan and Stoudmann (2006) observe that it is unpredictable in its impetus and its interpretation, adding, “The impact of globalization is vast, as the definitions that we present here indicate” (Al-Rodhan and Stoudmann 2006:3).

What therefore becomes clear is that several key words and/or related words appear repeatedly in Al-Rodhan and Stoudmann’s (2006) collection of definitions, notably: capitalism, cultural, economic, integration, interdependence, international, movement, national, political, social, and trans-national.

Al-Rodhan and Stoudmann (2006) support what Jones defines as a central concept of inter-connectedness. They pronounce that globalization *is* the debate and the debate *is* globalization, “Without one, the other is inconceivable” (Al-Rodhan and Stoudmann, 2006).

Furthermore, Al-Rodhan and Stoudmann conclude, “The matter of defining globalization can be deemed useless because of its shifting nature, its ambiguity, and its influence from the perspective from which one views it” (Al-Rodhan and

Stoudmann, 2006). They universally conclude there is no single concept that can be defined. Its indefinite nature and place in time causes it to be addressed by its present perspective only. Their final evaluation may be that globalization is potentially difficult to define, because it is hindered by the constant geo-political implications of change.

Scholte (2000) expands his definition, in essence agreeing with Al-Rodhan and Stoudmann, about globalization being a confused activity with his five additional descriptions:

1. “Globalization as internationalization. Here globalization is viewed 'as simply another adjective to describe cross-border relations between countries'. It describes the growth in international exchange and interdependence. With growing flows of trade and capital investment there is the possibility of moving beyond an inter-national economy, (where 'the principal entities are national economies') to a 'stronger' version - the globalized economy in which, 'distinct national economies are subsumed and rearticulated into the system by international processes and transactions' (Hirst and Peters cited in Scholte 2000: 8 and 10).
2. Globalization as liberalization. In this broad set of definitions, 'globalization' refers to “a process of removing government-imposed restrictions on movements between countries in order to create an 'open', 'borderless' world economy” (Scholte 2000: 16). Those who have argued with some success for the abolition of regulatory trade barriers and capital controls have sometimes clothed this in the mantle of 'globalization'.
3. Globalization as universalization. In this use, 'global' is used in the sense of being 'worldwide' and 'globalization' is “the process of spreading various objects and experiences to people at all corners of the earth”. A classic example of this would be the spread of computing, television etc.
4. Globalization as westernization or modernization (especially in an 'Americanized' form). Here 'globalization' is understood as a dynamic, “whereby the social structures of modernity (capitalism, rationalism,

industrialism, bureaucratism, etc.) are spread the world over, normally destroying pre-existent cultures and local self-determination in the process.

5. Globalization as deterritorialization (or as the spread of supraterritoriality). Here 'globalization' entails a "reconfiguration of geography, so that social space is no longer wholly mapped in terms of territorial places, territorial distances and territorial borders". (Scholte, 2000: 15-17)

Scholte's critical definition is comprehensive in its design, as it denotes accessibility and change. These attributes are arguably integral to this research because all world sport constantly modifies and transforms itself. Change in culture, economies, marketing techniques, political structures, and probably most of all, technology in the WFOC narrows the world as a singular place in producing an approachable and attainable complex as a business and sport.

In contrast but also useful is Kaplan's (2009) theory that people and ideas shape world events, but geography still determines the involved people and these world events. This hypothesis irrefutably can characterize all globalization, and if the North American denominator is exercised upon this subject in particular then his 'revenge of geography' theory gains relevancy to this subject and its research (Foreign Policy 2009).

Such a perspective is important because culture is a mainstream piece of the globalization of the World Formula One Championship. There is a challenge to determine what is American, European, or other. Naim (2009) further suggests, "Globalization no longer means Americanization" and this thought is consistent with other ideas exemplified by Al-Rodhan, and Stoudmann but it does not eliminate Americanization. Americanization and Westernization remain vital forces of globalization. This becomes another key part of proving the purpose of the thesis.

Smith (2005) also talks about the 'liberalism' of American globalization. His belief is that the "progressive interlocking of liberal thought is not seamless but practical" (Smith 2005). He further indicates his belief that "pacing through the modern world, the 'New World', liberal thought has become generalized and at the same time flattered itself as universal. It has represented itself as an abstraction

above the geographical and historical specificities of European expansion” (Smith 2005). This is a point made also sharply by Mehta (2003), who recognizes that “the liberal justification of empire was vitally enabled by the abstraction from territorial realities in particular. American liberalism rests in part on a ‘lost geography’. This lost geography came to fruition in various guises, most recently in twentieth and early twenty-first century ideologies of globalization. In addition, liberal universalism fuels a powerful de-politicization of global ambition in the popular imagination. But the abstraction from space and time is in no way automatic” (Mehta 2003). Mehta argues that America’s historically constant westward expansion has caused an uneven geography of sorts.

Technology and other commercialized aspects are key components concerning the globalization of the WFOC. Martin Wolf (2004), a stout supporter of the general concept of globalization, further suggests that changes in the technology of transport and communications create opportunities for commerce and others: “The enemies of globalization are opponents of the market economy. That is the heart of this debate. But what is such economy? Where has it come from? How does it work, both within a country or across frontiers? It is impossible to assess the critique of globalization without trying to examine these fundamental questions” (Wolf 2004).

These moving parts are why Aninat (2002) further describes globalization as a process through which an increasingly free flow of ideas, peoples, goods and services, and capital leads to the integration of economies and societies.

Moore’s (2001) early idea of globalization was based around sociology and other general disciplines such as economics, history, and political science. Other original definitions soon progressed into topics including nationalism and extensions of those teachings. It could be said that Moore’s idea, although commonplace, is the kind of concept that can introduce the WFOC to basic globalization theory and be accepted into the research to better comprehend the circumstantial elements of the WFOC.

These numerous scholastic opinions indicate a continuous transition of the understanding of globalization. Shrugan (2009) identifies the rapid progression of democracy, in its traditional definition, into its contemporary determination. This is the kind of rapid progression we have seen in the WFOC as its participation

increases. The WFOC is a rapidly moving enterprise because its expenditures, income, commercial value, technologies, and other elements move at lightning speed, causing constant change and the need to stay modern.

Shrugan's (2009) own assessment offers a continuing thought: "While traditional means of representation have certainly produced positive results in many democracies around the world, they are no longer and should no longer be the sole means of democratic representation in today's globalized world. As a result of globalization, there has been a growing sense of interconnectedness among states, economies, cultures, and individuals. A prominent feature of contemporary globalization is the multiple loci of power in the global arena, with territorial states no longer being the sole actors. Other actors, such as individuals, technology, corporation, NGOs and IGOs now shape inputs and outputs in the global system" (Shrugan 2009). This has greater relevance in the next two sections on economic globalization and cultural globalization, setting up the interconnectedness with the WFOC.

This thesis will argue that that the WFOC needs to be understood as an entrenched global entity, meaning it has the capability and sustainability to be a complicated worldwide concern.

2.1.1 Economic Globalization

Global economic policy is determined by corporate or government structures. Porter's idea is appropriately accurate when applied WFOC, "Thinking about competition and strategy has been dominated by what goes on inside companies" (Clark, Feldman and Gertler, 2000: 253).

Dicken (1992) logically interconnects the different views of globalization because they change and grow, thus implying a global shift. In his opinion, transnational corporations (TNC) are driven by profits that are the result of such shifting. Hirst and Thompson (2001) would concur, elaborating, "*A globalized economy* is an ideal type distinct from that of the international economy and can be developed by contrast with it. In such a global system distinct national economies are subsumed and rearticulated into the system by international process and transactions. The international economy, on the contrary, is one in which

processes that are determined at the level of national companies still dominate and international phenomena are outcomes that emerge from the distinct and differential performance of the national economies". They continue, "The global economy raises these nationally based interactions to a new power. The international economic system becomes autonomized and socially dis-embedded, as markets and production become truly global. Domestic policies, whether of private corporations or public regulators, now have routinely to take account of the predominantly international determinants of their sphere of operations. As systematic interdependence grows, the national level is permeated by and transformed by the international" (Hirst and Thompson cited in Bryson, Henry, Keenble and Martin 2004: x).

In the end, this thesis will argue that the WFOC is embedded in a process of economic globalization as a small part of the overall global industrial complex. Essentially, this translates into corporate profits for those involved in this global phenomenon, in this circumstance, meaning the WFOC is both its own internal corporation and an industrial sports complex. Cavanaugh and Mander (2006: 273) sum it up thus: "Corporations have become the primary organizing instrument for economic, political, and social activity on the planet. Through their market power, billions of dollars in campaign contributions, public relations, advertising and sheer scale, corporations create the visions we live by and exert great influence over the political power structures that rule us. It is fair to conclude, as Korten (2001) writes, 'that corporations have already achieved "corporate rule" to the detriment of democracies, social equity, and nature'. It is exactly for such reasons that fierce global protests have brought millions of people onto the streets to demand massive structural change in corporations, the rules they operate by, and their very existence" (Cavanaugh and Mander, 2006: 273).

There is a substantial social science literature that theorizes economic globalization as a historically grounded transformation. Holm and Sorenson (1995) call globalization, "The intensification of economic, political, social and cultural relations across borders". Steingard and Fitzgibbons (1995) apply a free market approach to the definition, defining globalization as, "An ideological construct devised to satisfy capitalism's need for new markets and labour sources and propelled by the uncritical 'sycophancy' of the international academic business

community". Gilpin (2001) says globalization is, "The integration of the world economy". Oman (1996) opines, "Globalization is the growth, or more precisely the accelerated growth, of economic activity across national and regional political boundaries. It finds expression in the increased movement of tangible and intangible goods and services". Each WFOC race is a singular event held in an individual national economy that is a component of its global community. This makes van Liemt (1998) relevant when he states globalization is "The growing interdependence of national economies" (Holm and Sorenson, Steingard and Fitzgibbons, Gilpin, Oman, van Liemt cited in Al-Rodhan and Stoudmann, 2006).

This thesis will argue that each WFOC race will generate an enormous amount of revenue. So how much money does a single WFOC generate? The promoter of the Canadian race, 006, said, "A very significant amount. Nearly \$100 million in Canadian dollars". When applied to the WFOC, this certifies what van Liemt (1998) means by the growing interdependence of national economies. These are regionally implicated new business monies that originate from comprehensive sources, indicating that all elements are comprised of the WFOC profits from global economic expansion.

2.1.2 Cultural Globalization

Globalization would have little meaning or value without cultural considerations. Some theories concentrate exclusively on that idea.

Featherstone's (1995) contention is that, "The process of globalization suggests simultaneously two images of culture. The first image entails the extension outwards of a particular culture to its limit, the globe. Heterogeneous cultures become incorporated and integrated into a dominant culture which eventually covers the whole world. The second image points to the compression of cultures. Things formerly held apart are now brought into contact and juxtaposition". Albrow (1990) would agree, because his opinion represents a consistent end-game analysis of cultures ultimately playing on a parallel plateau: "...all those processes by which the peoples of the world are incorporated into a single world society" (Albrow, 1990).

Cultural theories typically offer the most diverse views; however there is considerable harmony with enlightenment on globalization found in much academic thought.

Al-Rodhan and Stoudmann (2006) collected various cultural/ethnic definitions from experts, saying Waters (1995) defines cultural globalization as “A social process in which the constraints of geography on social and cultural arrangements recede and in which people are increasingly aware that they are receding”. Laidi (2002) argues that the cultural dimension of globalization is, “A process of intensifying social relations on a worldwide scale that results in an increasing disjunction between space and time”. Coopan (2001) calls it, “A process of cross-cultural interaction, exchange, and transformation”. Berger (2002) says, “Globalization is, *au fond*, a continuation, albeit in an intensified and accelerated form, of the enduring challenge of modernization. On the cultural level, this has been the great challenge of *pluralism*: the breakdown of taken-for-granted traditions and the opening up of multiple options for beliefs, values and lifestyles. It is not a distortion to say that this amounts to the great challenge of enhanced freedom for both the individuals and collectives” (*italics in original*). Nikitin and Elliott (2000) corroborate that, “Globalization is ... the establishment of the global market free from socio-political control” (Waters, Laidi, Coopan, and Berger cited in Al-Rodhan and Stoudmann 2006).

Aninat (2002) also acknowledges the cultural impetus, saying, “Globalization can be defined as the increasing interaction among and integration of diverse human societies in all important dimensions of their activities – economic, social, political, cultural, and religious”. Giddens (1990) adds, “Globalization can thus be defined as the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa”. Integrated or segregated, all of these remarks by academics in the field make significant statements about cultural implications that exist and prosper in the definition (Al-Rodhan and Stoudmann 2006).

The global cultural dimensions of the WFOC are multiple and diverse, but what is unique is its ability to redefine its cultural make-up under its trans-national commercialization. Andrews and Silk (2001) recognize the mass cultural

sophistication found in the WFOC and how it is able to centralize itself, “The penetration of local cultures by the economics and imagery of global capitalism represents the latest and most sophisticated attempt by transnational corporations to command the widest possible market base and thereby accrue the benefits derived from the realization of colossal economies of scale. Rather than attempting to neuter cultural difference through a strategic global uniformity, many corporations have acknowledged that securing a profitable global presence necessitates negotiating within the language of the local. This article outlines some of the ways that sport — as a de facto cultural shorthand — has been appropriated within and through the advertising campaigns of transnational corporations as a means of contributing toward the constitution and experiencing of national cultures” (Andrews and Silk 2001).

Jones (2006: 55) says, “A number of important contributions to the globalization debate have argued that cultural issues are the heart of globalization as a wider phenomenon”. This thesis will argue that the WFOC is part of this wider phenomenon.

So it would be naïve to argue that cultural globalization is void in the WFOC because the ‘heart’ of the challenges to globalization theories begin with all ‘world sports’, of which the WFOC is one. The existence of cultural globalization in sport, and, in particular, the WFOC is undeniable. This is apparent by its multi-ethnic fan base and its multi-national participation in commercial, human, mechanical, and technological forms.

2.1.3 Challenges to Globalization Theories

The very term ‘world sports’ manifests extension in two distinct directions: 1) that globalization extends into sports, and 2) that the globalized methods employed are used in sports. The designation Mega Sport propels those two points to a further undeniable position.

Today, globalization remains fashionable but is much more than a ‘buzzword’, an expression often attached to it. It has been increasingly found that, as Scheuerman (2002) describes, “In popular discourse, globalization often functions as little more than a synonym for one more of the following phenomena:

the pursuit of classical liberal (or 'free market') policies in the world economy ('economic liberalization'), the growing dominance of western (or even American) forms of political, economic, and cultural life ('westernization' or 'Americanization'), the proliferation of new information technologies (the 'Internet Revolution'), as well as the notion that humanity stands at the threshold of realizing one single unified community in which major sources of social conflict have vanished ('globalization integration').

Challenges to globalization can take various forms and shapes: 1) it can be packaged as singular or plural, 2) it can be cultural, economic, industrial, political, technical, or all of these or a combination of some of these, or 3) as Jones (2006) says, it can be indefinable. Emory University's 'The Globalization Website' (2013) proclaims globalization as a process which the capitalist world-system spreads across the actual globe. It further declares that this evolution was completed in the twentieth century. This restrained definition would seem inconsistent with more comprehensive definitions that may defend globalization as an ongoing process. Nonetheless, it is another academic definition that creates a theory that must be considered, not only in general terms but directly considering the capitalistic tendencies of the WFOC business.

In culmination, to learn about the challenges to globalization, this research finds it imperative, even compulsory, to contemplate all definitions of traditional globalization hereby illustrated inclusively to challenge the theories that may or may not be applied in this research. Regardless of any definition, it can be agreed that, "Globalization is the increasing interconnectedness of people and places as a result of advances in transport, communication, and information technologies that cause political, economic, and cultural convergence" (About 2013). However, this report argues that the WFOC is distinctly something more than these accepted general definitions presented, in view of the fact that globalization in the WFOC is a far more enhanced version of any previous discussed definition. The WFOC is a highly detailed, independent world confederation of relationships that boils down to the most intricate situations, i.e., political decisions made by leaders of nations, merchandising of sportswear by major manufacturers, habits of different populations, millions of dollars (and Euros) spent on media advertising, or the precision of a millimetre in a way an upright is fabricated for a technologically

advanced race vehicle. The definitions, some used and some not used, are plentiful and meaningful to debunk any challenge to the intended application of the research.

2.2 Global Production Networks

The Global Production Network (GPN) is a contemporary abstract idea that pertains to the inter-connectedness of global corporate executive and industrial functions through its governance, operations/production and sales/transactions of its specific products and/or services that are ultimately produced and distributed for the act of using up that resource. The concept of GPN can be found in both academia and in global corporate environments. Coe, Dicken and Hess (2008) stated at their time of writing that this concept had only been in existence for the past decade and a half (so is now more than two decades old).

2.2.1 The Concept of a GPN

Conceptually, this abstract idea of inter-connectedness, Global Production Networks, has often been recognized first in academic and corporate circles. Coe and Wai-Chung Yeung (2015) stated that rapid and profound developments in the world economy have presented sizeable obstacles to theorization for the past 25 years. Historically, they believe Global Value Chains (GVC), the idea that fragmented supply chains are coordinated by a lead firm, were the forerunners of GPNs and ultimately influenced by two other social science theoretical perspectives: the actor-network theory, where networks are shaped by their relationships with other entities, and the self-defined 'varieties of capitalism' and other self-serving interest.

Coe and Wai-Chung Yeung (2015) identify a GPN as being "Constituted by a lead firm and other firms and extra-firm actors". The globally significant firm or lead firm with its strategic partners and specialized suppliers is the central coordinator, domestically or internationally. The actors are research, including design, and development; the production or the transformation of inputs, sales and marketing, including distribution; and consumption, including after-sales service. This sums up the concept of a GPN.

2.2.2 World Auto Manufacturing GPNs

There may be no better place that indicates a GPN than global automobile makers. Coe and Wai-Chung (2015) would concur, naming the automobile manufacturing dynamic a globalizing industry and its GPN economic globalization. This thesis argues that the globalization of WFOC can be well informed by understanding the way in which the WFOC is linked to automotive industry GPNs.

Williamson et al. (2008) state that an “important understanding of a GPN [in this capacity as they were investigating auto makers’ relationships with GPNs] was made by Gereffi *et al.*, (2005), highlighting two critical issues: (a) the governance structure, i.e., authority and power relationships that determine how financial, materials and human resources are allocated and flow within a chain; and (b) upgrading, meaning that to advance in the international context, companies in emerging countries have to initially join GPNs led by multinationals of developed countries, taking responsibilities for activities that the latter are not interesting in doing”. Within the auto manufacturing trade, this is considered outsourcing and is a fast-growing component of most GPNs.

2.2.3 A Global Automotive Industrial Complex?

Sturgeon and van Biesebroeck (2008) profess that, in most countries, automotive production and employment are typically clustered in regional industrial areas. Detroit, in the US, is probably the best example. Lesser examples would be Toyota City in Japan and Wolfsburg in Germany. Production plants in these clusters are complemented by a global value chain of suppliers. The regional clusters are located globally and are able to distribute globally to a worldwide market because of this type of system. Their growth ability, according to Humphrey and Memedovic (2003), is situated in outsourcing parts and new sales to emerging markets, which allows them to integrate themselves into the business of trans-national corporations. This would constitute a global automotive complex.

As a GPN, the global automotive industrial complex is subjected to various arguments. The viewpoints of Coe, Dicken, and Hess (2008) regarding automotive GPNs in such international environments are summarized in four distinct parts:

“In the context of GPN analysis, four aspects of standards are especially important. First, standards apply to different aspects and/or parts of a value chain or GPN (for example labour conditions or environmental protection). Second, the standards implemented may take different, stronger or weaker forms, e.g. enforceable rules or less binding codes of conduct. Third, while some types of standards may be sector specific, others may be generic, but vary in different geographical and institutional contexts. Fourth, standards are produced by a variety of public and private actors, thus reinforcing complex governance structures in GPNs” (Coe, Dicken and Hess 2008).

2.2.4 The WFOC as a GPN

It may be a stretch to claim that the World Formula One Championship is a GPN, but a case can be made because it can be argued that the WFOC is involuntarily involved in or directly associated in a wide range of industrial GPNs. The WFOC has its authoritative structures and a centre of its activities. This contains its suppliers and sub-suppliers with its teams, corporate sponsors, technologies and other automotive suppliers. Lastly, it has its global market, live and media, for its distribution.

One person who has begun to advocate that idea is Los Angeles-based business consultant and motorsport writer, Steve Mayer. Mayer initially told me that he heard of the GPN concept but knew little about it. Later he said, “There are elements that are unique to Formula One that might foster the belief that Formula One is a GPN. Formula One is considered by many to merely be a form of entertainment. Formula One is also a vehicle to create brand awareness, international consumer sales, and business/economic development”.

If Mayer is correct about the WFOC being part of the entertainment industry, then it can be argued that the entire media industry is an even greater GPN, encompassing television, radio, film, newspapers, magazines and other related media.

2.3 The Globalization of Sport

To many citizens of the world and inside the community of world sport itself, the term globalization is generally accepted and initially considered nothing more than the 'buzzword' just mentioned. It has already been well established that globalization is much more than that. It is a word used by academics, the media and their peers, unchallenged by the general population and sport. It is merely assumed that the word globalization is universal in nature and can be put into use by and for any discipline. What may transpire is the emergence of a new definition or interpretation that is apropos to world sport or even more exclusive to the WFOC. The emerging definition may be determined as a sub-category of the generally accepted term but not as widely recognized because of its limited classification.

The definition of globalization for all world sport employed in this study is about the global connectivity of culture, commercialism, media, political administration, and technology to form the business and competition of sport. This becomes more enhanced or specialized when the term motor sport or the WFOC is utilized.

Ultimately, that definition is further generated and proven by this research to be limited to the WFOC and excluding other world sport. The globalization of the World Formula One Championship and its relationship with North America may be a sub-category of all world sport or simply be uniquely powerful enough to stand alone as a worldwide industrial sports complex, as is the opinion of this research. This thesis makes a concentrated effort to designate many of the findings in respect to this original argument.

2.3.1 Global (World) Sports

The research initially identified three specific world sport groups that may possibly contribute to a globalized industrial sports complex theory:

- 1) Major regional sports and sporting events with limited global influence
- 2) Major world sports and sporting events with a fringe global influence
- 3) The three most significant sports or sporting events that form a globalized industrial sports complex individually in their own well-defined frameworks.

As many as 4,500 different games may be actually played in the world, of which approximately 450 are some sort of a world sport and account for the composition of these three groups, most of which are listed in Appendix I.

Most regional sports and sporting events with limited global influence are national in general substance with some ability to penetrate some global markets. Their popularity and market potential has more regional value overall. An example of a regional world sport would be the World Series, which is a baseball championship in the United States. The final series is between two regional teams (actually from two different cities), but because it is a championship, it carries national significance. Although baseball is not played throughout the world and has little global influence, it is called a World Series. It is significant in nations where baseball is played or which produce major league players, e.g., Canada, Cuba, Dominican Republic, Japan, Mexico, North Korea, the United States, and Venezuela. Multiple possible comparisons can be drawn, such as the Liga A Serie in Italian soccer or the Super Bowl, which is the championship for American football, where there is significant regional and national interest and limited global significance, yet it is considered a world sport or World Sport.

It can easily be observed that there are some sports that are true world championships but are on the fringe of global acceptance due to their inability to produce enough continuous general interest and subsequent revenue. Although it would be logical for proponents of each sport to support its world championship sport status at the highest echelon, various financial criteria ultimately separate world sports from World Sports from Mega Sports. These events include rounds of certain world golf opens, tennis opens, and top-tier championship boxing. Most of these events are held in a single weekend or day and many events may include just one single participant representing a country. This structure restricts it from accomplishing the criteria to be a full member of the industrial sports complex. The overall stature of these events as world sports is probably no greater than most regional or national events, from their power to attract media coverage and marketing monies, but their ability to attract a larger global interest qualifies these categorical events as World Sports.

Appendix I allowed the research to decompose and discuss further which world sports are World Sports based on 1) global participation by the sport, 2) the

global locales in which the sport is played, 3) the level of financial impact provided by the sport in the global marketplace, 4) its worldwide cultural and historical relevance, and 5) its global media coverage. The extent of each of the five categories, considered objectively, has a pronounced influence on the determination of whether the sport is a major world sport. In effect, there are minor world sports. It has been perceived that some confusion can exist with the list because of sub-categories and sub-cultures within a sport. Certain groupings do appear and some may duplicate each other (e.g., soccer and World Cup, amateur boxing and professional boxing, baseball and the World Series, or the various categories of auto racing and the World Formula One Championship). In fact, they are often considered different within their own respective fraternities. A relevant example would be the two types of auto racing, drag racing and the WFOC; whereas drag racing is an event held in a straight line of about one mile long and ends after several seconds, a WFOC race is on a course of straights and turns over several miles, typically lasting two hours.

2.3.2 Comparing World Sports

Bale and Maguire (1994) suggest that comparing world sports has become simplified and has grown because of migration. Talent and interest in a sport is transferred globally. However, they hint that not all sports are equal. It can be argued, and will be discussed later in this research, that a world sport needs to penetrate (by the prescribed determinations) multiple nations on four or more continents to be accepted as a legitimate World Sport. This principle can forcibly reduce the cogent aspect of the meaning of World Sport. Contemplation would indicate that only a handful of major world sports are actually World Sports, including: auto racing (Formula One), auto racing (endurance), auto racing (Indy-car), baseball, basketball, bowling, boxing, cricket, cycling, football (American), golf, horse racing, ice hockey, Olympics (summer), Olympics (winter), polo, rugby, sailing, skiing (snow), soccer, Super Bowl (football), tennis, World Cup (soccer), World Series (baseball), and wrestling (professional).

There is a general concordance that experts, participants, and professionals from a particular sport would advocate the idea that their singular sport is a World Sport. Conceptually, based on the research's own discovery, this is precise;

however not all of these World Sports are equally self-supportable as their own industrial sports complexes.

The research detected in this comparison a certain arrogance by various kinds of participants that dictates the attitude that one's sport is superior to other sports. Confidence by participants is a huge factor in success or winning in any sport. Bandura (1986) attributes his applied Social Cognitive Theory as the basis of accomplishment, especially at a world sport level. He names four elements to explain his self-efficacy assumptions: 1) mastery, 2) modelling, 3) social persuasion, and 4) physiology.

The research will seek out various attitudes from other world sports to learn more about confidence levels. World-class boxing is an excellent example, where the utmost confidence is important to be successful as a participant; however it lacks global significance despite its premier participants being designated as world champions. While boxing can be found in most nations, venues for its highest echelons are limited to certain markets in Europe and more so in North America. David Diaz from the US and Andrzej (Andrew) Golota from Poland are both Olympians and former world boxing champions. They both agree the sport itself is an art, can be found virtually anywhere, and is followed in most nations. There is further agreement that the Olympics are its most powerful platform globally, because the Olympic Games bypass, as a whole, the power of any individual sport. However, both said world professional boxing becomes regionalized with global exposure and significance because gambling, television, and other economic conditions make a strong declaration that boxing is a candidate to be categorized as a World Sport and perhaps some events can be on even a larger scale. It was noted that nearly all big money events are held in the US, especially Las Vegas, for those reasons. This left the research with the feeling, to a certain extent, that it marginalizes its global reach and significance, except for the occasion grand event, thus arguably disqualifying itself as a Mega Sport.

Aavo Pikkuus, a Gold Medal Olympic cycling champion from Estonia, told this research that there are millions of bicycles on Earth, thus making it an obvious world sport. Observation clearly distinguishes bicycling as globally meaningful as a recreational sport. Pikkuus is a strong advocate of the importance of the Olympics because it allows smaller nations and less noticeable sports, like cycling,

to be more identifiable. There are also strong global industries to support the massive sales base it presents, giving it sustainability. Despite such endorsements, it is difficult to pretend cycling as a professional sport is anything more than a world sport because of its inability to be projected in a competitive nature compared to other sports that are able to attract media attention.

Golf is a unique game that has monumental global penetration. Colvin (2008) thinks that talent is grossly overrated in sport; thus reasoning why an estimated 60 million people play golf worldwide. There are over 35,000 courses found on six continents and the rules are consistent, making it easy to adopt. Larry Sinclair of the Professional Golf Association (PGA) told me that about half of all golf courses in the world are located in the US. Sinclair is a Director of Marketing for both the PGA Tour and the Ryder Cup, and he believes golf is enduring because of the millions of amateur players in the world, its system to provide champions from various countries, its popularity on television, its marketing and merchandising. However its millions of amateur players are recreational and not masters of the sport. Its professional players represent a very small pool that is challenged by a confusing system built from multiple tours that determines its champions. The visibility of its champions makes it somewhat suspect as well. Even its most popular events, like the Ryder Cup, are limited to just 156 players according to Sinclair. Its industry is ingenious but suffers from its limited recreational viewing market and lack of repeat sales. Golf enjoys exceptional television coverage from a highly dedicated audience but ratings are inconsistent and not overwhelming. Professional golf is widely accepted because it is able to extend itself into the play market, is very well organized, and is clearly a strong world sport, but it still lacks enough mainstream appeal to everyone to consider it a Mega Sport.

Biggest Global Sports (2015) rates ice hockey as the world's biggest winter sport. Gene Ubriaco is a former National Hockey League (NHL) player and NHL coach, and coached the Italian National Hockey Team in the Winter Olympics. He believes hockey is a renaissance sport because of its more recent global growth. He asserts it has grown from a fashionable sport in Canada to one that is enjoyed in such surprising places as Australia, Israel, Korea, and Thailand in just fifty years. He attributes this growth to it being a game that is fun to play, interesting to

spectators, and supported by an industry that makes it available now more than ever. Ubriaco admitted that hockey previously failed at making itself available because of costs, but evolution was attained despite obstacles and by educating detractors. The more recent popularity of Olympic and professional hockey, in his opinion, has placed hockey on the pedestal of world sport. Hockey is strongly favoured in its traditional and colder climate territory, but unfortunately hockey still is not mass marketed in the world because, as Ubriaco explained, of the need to play on a piece of ice.

According to the Fédération Internationale de Football Association or FIFA (2015), between 240 and 265 million people play soccer. An astounding 3.4 billion people watched the 2010 World Cup on television, indicating that soccer is a world sport and the World Cup is arguably a Mega Sport because of its global spectator penetration, live and extended. It is a simple game that can be played virtually anywhere, according to Jorge Carranza, a goalkeeper for Club Deportivo Godoy Cruz in the first division of the Argentine soccer league. He said it is first the low cost that makes soccer appealing, especially in third world countries. He added that it is the dream of every boy to play on his country's national team and ultimately play in the World Cup. Its sheer numbers of participants, from play yards to national teams, make it perhaps the most popular and powerful of all world sports. The World Cup represents the largest collection of world-class athletes that are performing for the largest audience in the world. If size matters, then soccer is the absolute world sport and the World Cup is a Mega Sport because of its global network that reaches every country in the world at some level.

Horse racing is a difficult sport to categorize because ownership is limited to wealthy families or individuals and much of its fan base is attracted to gambling as opposed to racing. George Wode Frazier is such an affluent individual and has owned both formula race cars and thoroughbred race horses. The Kentuckian noted that the ownership has an arrogant demeanour. Frazier said high-calibre horses can be raised anywhere from the Middle East, Europe, Hong Kong, and the US. Regardless of locale, costs are extraordinary and, he affirmed, limit the real players in this sport. He identified people that attend the Kentucky Derby and other major events as nothing more than party-goers. Interestingly, Frazier believes the World Cup is the biggest sporting event in the world and rated the WFOC second,

as the only two real world sports that earn the title Mega Sports, dismissing the Olympics.

According to Biggest Global Sports (2015), tennis ranks as a top seven sport in virtually every country. Tennis, like golf, suffers from a confusing ranking system according to Turkish professional player Ali Colak. He thinks this hurts its popularity as a spectator sport because it is difficult to ascertain the best players. This, he believes, causes lack of interest. Colak said tennis is a world sport because tennis is played throughout the world in all climates; indoors or outdoors. He believes tennis is one of at least five or six sports that can be considered a World Sport.

It was noted that both Sinclair and Colak used the word 'confusing' to define their respective championship systems. Confusion alerts the need for a more defined and uniformed method to determine world championships. Later, it will be evident that the transpiring Mega Sports do not suffer this calamity.

Like other sport, the WFOC begins in other forms. Vladimir Kourilo is a past director of the Russian Automobile Federation and chaired its rally department. Kourilo pointed out that auto racing can take on many appearances, such as formulas, sedans, rally cars, and karts. This makes motor sport more appealing and available. He regards auto racing in general as a universal sport of which the WFOC is the pinnacle. He called Formula One the only World Sport because it occurs each year, different from the World Cup or Olympics which are every four years.

These individual views conclude favourably with Bandura's self-efficacy theory that was applied to individual participants and can now be used with sport as a whole: the business model of the sport, the mastery of that business aspect of the sport, the persuasion of the sport's market, and the physiology or total make-up of the sport. All sport is built with confidence, and world sports bring about even a loftier degree of self-assurance, but the Mega Sports exclusively bring this courage to its uppermost level because only the WFOC, the Olympics and World Cup exhibit themselves as industrial sports complexes by complying with this theory and its definitions.

2.3.3 Statistical Analysis of World Sport

It is difficult to ascertain a sport's global significance because of the ambiguity and inconsistency involved. There are various yardsticks that can determine a sport's popularity including: a) total number of participants, b) total reach of the sport by country, c) television reach by household, d) television reach by total viewers, e) live attendance at events, f) revenue generated by tickets sales and licensing, and g) advertising revenue.

Bialik (2012) quotes David Mudd, the Business Intelligence Manager for the Outdoor Industry Association, on how to calculate sport participation: "There really is no international standard defining what is participation" (Bialik 2012). Thus this research took on the responsibility to compute which world sports are well-founded as the pinnacles of World Sport.

In terms of total numbers supplied by the International Olympic Committee (2002), volleyball has both the most participants and number of affiliated national federations. Gym and beach volleyball combined have an estimated 998 participating organizations and 218 federations; however they generate little live attendance, minimal comparable television coverage, and minute advertising revenue. This sharply reduces volleyball's stature as a World Sport. Conversely, basketball is second with 400 million participants but yields large live attendance at events, exceptional television coverage, and gigantic advertising revenue, thus raising its importance as a World Sport.

Team sports dominate live attendance figures, with the US-based Major League Baseball (MLB) leading in total attendance with 73,451,522 fans in 2011. Japan's Nippon Professional Baseball was second with 21,679,596 fans, followed by the American-based National Hockey League (NHL), National Football League (NFL), and National Basketball Association (NBA). European football teams take up the next five places: Bundesliga (Germany), Premier League (United Kingdom), La Liga (Spain), Football League Championship (United Kingdom), and Serie A (Italy). It is noted that the MLB, NHL and NBA all extend with franchises into Canada. These exceptional figures will categorically qualify these team league sports as World Sport (Top End Sports 2012b).

The NFL, however, has the largest average attendance, with 67,358 fans per game followed by the Bundesliga, Premier League, Australian Football League, and MLB (Top End Sports 2012b).

The month-long Tour de France cycle race produces the largest single event live attendance with an estimated 12 to 15 million spectators. The Indianapolis 500 auto race is considered the largest single day live attendance event with 400,000 fans (some estimate up to 700,000). These single events undoubtedly qualify as World Sport (Top End Sports 2012b).

The highest-earning sports teams often dictate the most valuable sports teams, and this research learned of a direct correlation. In 2011, European soccer clubs Real Madrid (\$592 million), FC Barcelona (\$537 million) and Manchester United (\$472 million) occupied the first three positions of monies earned. The New York Yankees baseball team (\$441 million) and the Dallas Cowboys football team (\$420 million) were the highest-placed American earners in the fourth and fifth positions (The Richest 2011).

Through 2013, Real Madrid was also the most valuable team in sports at \$3.39 billion. Manchester United (\$3.17 billion), FC Barcelona (\$2.6 billion), New York Yankees (\$2.3 billion), and Dallas Cowboys (\$2.1 billion) followed. The balance of the list is dominated by MLB and NFL teams. All values had increased sharply since 2011 (Forbes 2013).

Television coverage of a sport greatly assists in achieving World Sport status. Nielson (2010) reported that a record 43,700 hours of sporting events was broadcasted by networks and cable outlets in the US alone in 2009. The overwhelming majority of this coverage was of MLB, NFL, NBA and NHL. An additional 81 million people visited sports websites that same year.

The largest single global television audience ever recorded was for the World Cup final between Italy and France in 2006. That game was viewed by over 322 million people worldwide.

NASCAR has consistently overpowered Indy Car in live attendance, television ratings, and advertising revenue the past decade, despite the Indianapolis 500 being the largest single day sports event in the world and the largest rated auto racing television spectacular. Although American-based and

inspired, both circuits have international recognition and are able to attract more advertising monies than Formula One in the US. In 2012, there were several companies, from a wide range of industries, who advertised in NASCAR with expenditures approaching several million US dollars. The biggest spender in Indy Car was a tire company (\$954,500) followed by an Internet provider (\$875.4). The biggest advertiser in the US for the WFOC is a camera firm (\$243,200), however this is exceeded by an automobile manufacturer's combined model campaign (\$177,700 + \$153,200); all relatively low amounts for a national advertising campaign. Despite a lack of international tracking, intense global television coverage has allowed specifically golf and tennis into the exclusive category of World Sport. Television ratings have traditionally fluctuated, from spectacular to mediocre, depending on the 'star power' of an event. Advertising revenue has made professional golf an attractive television destination with heavy endorsement from men's products. An erection dysfunction drug was its largest spender on the men's tour at \$18 million in 2012. This compares to just \$481,000 by an insurance company as the largest spender on the women's golf tour. Tennis has a dedicated but even more restrictive audience and earns about half as much revenue than golf. Their respective premier events, the US Master's Tournament for golf and the Wimbledon Tennis Championship for tennis, are both World Sports and this elevates these two sports overall and assists in the prominence of sister events.

Overall, in the US, the biggest advertiser in sport in 2012 was a wireless telecommunications company (\$342.8 million) followed by a beer company (\$213.3 million), reversing their order from 2010. Another wireless telecommunications company was ranked third. It can be argued that the United States is not only the world's largest marketplace but also a global leader in advertising dollars. Statista (2015) ranks the United States first in advertising dollars spent, at over \$180 billion in 2014, making it a logical target for trans-national corporations to reach out for marketing exposure.

2.3.4 Global (Mega) Sports and Events

This study has determined that three sports, as Mega Sports, have exclusively the definition of globalized industrial sports complexes because of their own unique complexity, meeting all the criteria of qualification of industrial

construction and optimum global reach. The criteria include massive general population interest capable of producing immense nationalism, commercialism that generates large amounts of revenue through marketing, government involvement to secure the event taking place, and substantial media coverage. The three, in no specific order of importance, are: 1. the World Cup (football or soccer), 2. the World Olympics; (multiple events) both summer and winter, and 3. the World Formula One Championship (auto racing). Only these three global sporting phenomena qualify by meeting the criteria of the definition of a Mega Sport. Some world sports may appear to qualify, e.g. the four Grand Slam tennis tournaments, the four major golf tournaments, the America's Cup yachting championship, the Super Bowl (football), the World Series (baseball), and the Indianapolis 500; however, these events are considered fringe major world sports because of some lack of global penetration and insufficient industrial structure in comparison to the identified three Mega Sports.

The World Cup is a collection of thirty-two national football (also known as soccer) teams that first qualify through regional championships to play for a single world championship crown. The World Cup is held every four years and is represented by teams from nations on six continents. Typically, a single country will host all rounds of the World Cup over an approximately two-week period.

The Olympics are also held every four years for each of its two types: summer and winter. Therefore there are two Olympics held during each four-year period but alternating every two years. Through each nation's Olympic committee, teams or individuals compete in a number of different events during a two-week period. Depending upon a country's geographical location and climate, some may be more engaged with one type of Olympics than the other. Nations from six continents enter each Olympic Games. More nations participate in the Summer Games due to obvious meteorological conditions.

The World Formula One Championship is a series of up to twenty automobile races entered by some of the most prestigious car makers in the world, driven by the world's best drivers. The series presently goes to five continents over about a nine-month period. The WFOC is the more complex of the three members because it is held annually, in up to twenty different nations on five continents, over

an extended format of nine months, and introduces technologies that are transferred into the daily lives of the entire global population.

Like its two world Mega Sport counterparts, each WFOC race has an uncanny proficiency to pierce into the local population of any given event, the ethnically attached population, and its general worldwide audience. The general interest from worldwide audiences in the three world Mega Sports separates them from other major world sports in terms of the sheer number of hits or impressions. Penetration is achieved by superior live spectator count, television reach, and an immense array of other specialized media. This constitutes a total spectator count far exceeding their competition for the WFOC and the other two Mega Sports.

2.3.5 Analysing Mega Sport

Tomlinson and Young (2006) reveal the separation and consequences of what may be a super sport, super sport event or series of major events under a single banner: “The importance of sports mega-events has been recognized increasingly in a world of cultural and economic globalization” (Miller et al. 2001; see also the themed issue of *International Review for the Sociology of Sport*, September 2000).

In the final calculation, only three World Sports materialize into Mega Sport status. All three are massively different in their structure and mission; yet all three display vast cultural, economic, political, and social energy and power. This research identified and defined the select Mega Sports as:

- The Olympics (*Summer and Winter*), historically an event exclusively for amateurs, is an assemblage of events dictated by season. The Winter and Summer Olympics occur every four years and are now staggered. There are approximately 26 sports in the Summer Olympics in 39 disciplines and 15 sports in the Winter Olympics in about 45 disciplines; events are subject to change. Over 200 nations compete in the Summer Olympics and approximately 90 nations in the Winter Olympics. Events are held for both individual and team competitions. Awards are given by Medal: Gold (1st), Silver (2nd), and Bronze (3rd). In recent years, professional competitors have been allowed to compete in certain team sports. The

Olympics are governed by their own body, the International Olympic Committee (IOS), comprised of the national federations of various world sports.

- The World Cup is a soccer tournament held every four years for nations that advance from regional matches by group in the preceding years. The World Cup features the best players from professional teams around the world playing for their respective countries for the honour, virtue, and glory of that nation. These professionals, acting as amateurs for this event, play for a cup demonstrating world dominance in the sport. The World Cup is organized by the Federation Internationale de Football Association (FIFA).
- The World Formula One Championship is an annual global series of 16-20 automobile races on 5-6 continents, designated as Grand Prix for chosen nations, for the best race drivers and most advanced race cars in the world. The professional drivers are paid by retainers from the teams and compete to be World Champion. Teams compete for a Constructor's Championship that includes prize monies based on performance. The Federation Internationale Automobile sets rules and regulations for the WFOC; however the series is controlled by the Formula One Group.

B.R. in *The Economist* (2011), comparing major single events to equally important tournament-like events, states, "... I don't think these one-offs are good indicators" of World Sport. The three Mega Sports comply with this standard. However, he quotes Kevin Alavy, the Director of futures sport+entertainment, to set apart the World Cup and Olympics with the WFOC: "broadly speaking, the FIFA World Cup and the Summer Olympics are by far the two most-watched sporting events, with the UEFA European Championships ranked third. There's then quite a large gap to the FIA Formula One Championship, NFL Super Bowl and the IOC Winter Olympics" (Economist 2011).

Goodbody (2010) would agree, as he believes TV ratings are between the World Cup and Olympic Games only: "The Summer Olympic Games and the FIFA World Cup are not just easily the most significant sports events on the planet, they are also, in television viewing terms, the most significant events. Period". He cites Europe as the biggest market in football and the muscle and carry-over of the Summer Olympics at Beijing as making the difference: "If countries in the Far East were more successful in the World Cup, the ratings would be higher ...". Goodbody

also quotes Alavy saying, “The strength of the Olympics is that the interest is so disparate, with so many people in different countries, watching different sports round the clock over 17 days” (Goodbody, 2010).

While these two ‘experts’ reserve the World Cup and the Olympics as superior to the WFOC, it should be recollected that these are opinions only. In defence of the WFOC, this research on the sport giants is anxious to dispel these points of view with both defensive and offensive measures:

- Interest in the Olympics ‘peaked’ with the Beijing Summer Games because of the global interest in China. The Winter Games at Vancouver was considered to suffer from Olympic fatigue as attendance and ratings fell. The Summer Games at London experienced some degree of recovery (TV was up 6%). Regardless, Olympic television coverage is concentrated in the US (34.5 million of 219.4 million viewers from the London Games) and own half of all TV rights (NBC).
- The World Cup has not been able to permeate the world’s largest marketplace, the US, to its own desirable level.
- The WFOC affords comparable and favourable ‘numbers’ to both the Olympics and the World Cup over its accumulated annual results over a similar four-year period. The WFOC also penetrates markets in the Far East annually.

In conclusion, we have discovered that there are world sports, World Sports, and Mega Sports. The WFOC is a proven world Mega Sport with its own unique qualities not found anywhere else in world sports. According to Biggest Global Sports (2015), the WFOC is broadcasted to more than 200 countries with a viewership exceeding 500 million, making it one of top three sports in terms of global penetration and popularity. It also asserts that its constructors spend more than \$3 billion to participate in the WFOC, placing it at the pinnacle of trans-national corporate spending to secure its participation.

2.3.6 The Reach and Role of Mega Sport Global Media

This research may determine there are two distinct forms of global media that provide entertainment and news coverage of world Mega Sport: general media and specialized media. The Olympics, World Cup, and WFOC may be unique in attaining full global reach.

General media coverage of the world Mega Sports includes regular news coverage in electronic media (radio and television) and print (regular daily newspapers and general sport publications) as part of the systematic coverage of all sport as part of the news. The reach and exposure is sporadic, dependent upon the interest level in the different physical geographies.

Specialized media would normally include dedicated print coverage in specialized publications in general and those committed to its particular sport in the Olympics, or more likely the World Cup and WFOC. This is regardless of geographical location. Beginning in the late 1980s and early 1990s, there was a progression towards more specialized television worldwide coverage of the WFOC, especially in North America. The promotional arm of the WFOC even toyed with pay-per-view television with split screens and 'in-car' cameras to offer a greater appreciation perception for the entertainment of its most intrigued fans. Specialized media has a limited but targeted audience of the composite motorsport and WFOC fan.

2.3.7 Disproportionate Geographies of Global Sports

The Olympics' own website, www.olympics.org (2015), offers a review of all Olympic sports played, summer and winter, that indicates there are no sports that are organized and played on all seven continents, as Antarctica is incompatible with almost all sport. A smattering of the same sports are organized and played collectively in Africa, Asia, Australia, Europe, North America, and South America; however, only a relatively small number of World Sports, of which soccer is the most dominant. Basketball, boxing, golf, motorsports, and tennis, in particular, are World Sports that can be found globally. The three Mega Sports share that stage in those places.

Porter (2000) again adds something apropos when applied toward global sports in these types of congregates stated, "A cluster is a geographically proximate group of interconnected companies and associate institutions in a particular field linked by commonalities and complementarities" (Clark, Feldman and Gertler, 2000: 254).

Of the three Mega Sports, the World Cup, based on the viewership presented, probably attracts most global interest, but is limited to just 32 nations that actually participate at any one time. Initial interest is greater when there is the inclusion of qualification rounds which extend the term and number of countries competing.

Evans (2009) notes, "The Olympic games, with its potential for raising issues about elite sport and its meaning in both cultural and conceptual terms, has stimulated a great deal of research". Both Olympiads lure large world attention and highlight the sport and accomplishments of a nation. In the most recent Summer Games (held in 2012), 204 nations sent teams, and 88 nations came to the most recent winter Games (held in 2014). This is largely possible because the Olympics include other sports, not considered World Sports, making participation more convenient for smaller countries where minor sports play a more dynamic social role.

The WFOC presently hold events on 5 of the 7 continents (this changes): Australia, Asia, Europe, North America, and South America. At one time, Africa was represented with an annual visit to South Africa. This disappeared at about the same time Apartheid ended there. In the past decade there has been an influx of events in the Middle East and Asia: Bahrain and the United Emirates in the Middle East, and China, Malaysia and Singapore were added to Japan in Asia. Historically and politically, the Middle East has been somewhat of a marginal territory of Afro-Eurasia with some strong Euro-centralist influence. This largely explains the success of the WFOC in the Middle East. The new Russian event at Sochi, a location at the Georgia and Abkhazia border, may be considered either European or Asian. The WFOC in 2014 was played live in 19 different countries, by teams representing 5 separate nations, with drivers who are citizens of no less than 17 diverse places, and participating corporations based in at least 20 countries, accounting for its global interest that reaches nearly every corner of the planet. Its structure, as a private enterprise, allows it to be more profitable than both of its Mega Sport competitors.

2.3.8 Sport, National Identity and Cultural Globalization

The academic literature has a lot to say on the relationship between sport, nationalism and culture. Bairner (2001) talks about the differences between European and North American fan instincts. These same nationalistic instincts are applicable to other places in the world as well. Key contemporary actors in this regard are the nationalistic fans of a particular team or individual competitor in the world of increasingly globalized sport. Lesser examples of culture and pride in global sports would be the marketing of a product by certain corporations and certain economic factors (e.g., the German athletic sportswear company Adidas and its American competitor Nike are prime examples of trans-national companies utilizing global sport as marketing vehicles) from these places and control of the administration of a global sport (e.g., the Swiss-based and administered World Football Federation) and other political and social considerations that may be involved.

In an overall assessment found in Foer's (2004) *How Soccer Explains the World*, he talks about the failures of globalization in the game, the economics of the game and nationalism, concluding, "The story begins bleakly and grows progressively more optimistic. In the end, I found it hard to be hostile toward globalization. For all its many faults, it has brought soccer to the far corners of the world and into my life" (Foer, 2005). It would be difficult to argue with Foer's ultimate point that globalization has provided growth opportunity for soccer; or for all world sport for that matter. World Sport has taken advantage of the opportunity globalization has presented it.

Giulianotti and Robertson (2007) would strongly concur with Foer. "Sport historians have indicated the extensive interconnections of sport and global processes. The globalization of sport 'took off' from the 1870s onwards, as the 'games revolution' colonized British imperial outposts (e.g. cricket in Asia and Australasia), the 'global game' of football underwent mass diffusion along British trading and educational routes (e.g. in Europe, South America), and distinctive indigenous sports were forged as part of the invention of national traditions in emerging modern societies (e.g. baseball, American football in the United States)".

Giulianotti and Robertson (2007) expand:

“In a broad social scientific sense, it is eminently reasonable to have this debate speak to global issues and processes. Globalization is the axial theme of contemporary times, and the broad field of ‘global studies’ has mushroomed enormously since the mid-1980s, engendering diverse trans-disciplinary and transnational networks of scholars. More particularly, like other trans-disciplinary subjective fields, global studies have tended to lack a significant sport focus compared to investigations of other cultural forms, such as religion. Yet, we would argue strongly that sport is an increasingly significant subject for global studies, in its dual role as a long-term motor and metric of transnational change.” (Giulianotti and Robertson, 2007)

Giulianotti and Robertson are not arguing against the significance of sport in the globalization process but that it is becoming increasingly more important through trans-national proportions that would support the theories on the reality of industrial sports complex existences.

Silk, Andrews and Cole (2006) cite the making of the global sports economy as a sort of corporate nationalism. Referring to Theodore Levitt’s article in the *Harvard Business Review*, “The Globalization of Makers”, world sport continues to underpin debates pertaining to the nature and influence of economic globalization (Quelch 2003; Silk, Andrews and Cole, 2006).

This thought more supports the idea that globalization embraces world sport instead of vice versa, whereas world sport is part of the globalization process. Nonetheless, the result or effect is relatively the same and adds credence to the findings.

Amis and Cornwell (2006) add an examination of world sport in the global age and its corresponding local and global effects. They further the study of celebrity, tourism and media coverage in connection to the foundation study, indicating that the global effect is not limited to advertising per se. This approach can take the research beyond its intended objectives but this thought will extend the target information to allow greater research questioning that will make the

research results more complete than just a general global marketing project (Amis and Cornwell, 2006).

Amis and Cornwell expand the idea of solely sport into the categories and sub-categories that sport divides into, thus becoming a larger industry than just sport. This underscores its potency to be a global operation.

Smart (2005, cited in Giulanotti and Robertson 2007), regarding the early foundation and its golden age expansion of sport, adds:

“The formative roots of the close contemporary relationship between professional sport, corporate sponsorship, the media, and consumer culture, which has contributed to the growth of a globally extensive popular culture of sporting celebrity, lie in the take-off phase of the globalization of sport. The discussion is directed to an analysis of key interconnected aspects of the formation of a global sports network. This includes turn-of-the-century manifestations of sport’s globalization exemplified by developments in tennis and the Olympics, the establishment of sporting goods companies in Europe and the USA, early signs of an emerging culture of sporting celebrity, as well as the growth in media interest and associated developments in sport sponsorship.” (Giulanotti and Robertson, 2007)

Sporting events, teams, and personalities are attainable in this new, not-so-obscure global culture. The obvious emerging popularity of sport is centrally facilitated by this globalization process (Verity 2004). This application is compounded by the thousands of multi-national corporations involved with the events, teams, and personalities through various global advertising campaigns. It is apparent that the fan base and nationalism propel popularity into corporate sales for private multi-national companies and, to a lesser degree, tax revenues generated by tourism. Verity here agrees with Amis and Cornwell by supporting the actuality that sport is multi-faceted, spilling into other industries that affect and are affected by cultural dimensions. This defines the WFOC as its own independent industrial sports complex sponsored by its own cultural impacts and other social science considerations.

2.3.9 The Emergence of Global Industrial Sports Complexes

The industrial sports complex may be considered a secondary, explanatory title under the general definition, meaning that it is strictly a sub-category of globalization. While this may be accepted, the consortium of all world sport is arguably too large and too powerful to fall under this basic definition. In the past half century, World Sport has flourished into its own globalized industry. Regardless of the general description of globalization, it becomes apparent that the globalized industrial sports complex, over time, has continued to gain significance in all the individual fields of sport under its complex umbrella. Literature on global sport, specifically Bairner (2001), Foer (2005), and Jackson and Scherer (2010), reveals the opportunity to expand the study pertaining to its administration, marketing, media, nationalism, technology, and other branches of knowledge, deciphering its trendiness. This can be a fluid argument, because sport, in general, not only varies by interest and but also by its trendiness. The Olympics and the World Cup tend to be more popular every four years when the events take place, but interest decreases in off years. Some sports, including sports played by higher-income participants such as golf and tennis, prosper in times of a good global economy.

The term 'globalized industrial sports complex' is coined for and by this research. There is little, if any, use of this exact term in literature. However, this research indicated that much can be exploited from this term. Global administration of sport, culture and its related nationalism, and world marketing and its connected categories are tangible parts of the three main ingredients of the global industrial complex.

2.4 The World Formula One Championship

It is clear that the WFOC is a sport that in reality is a World Sport and, as we can now assume, a Mega Sport. What will be further learned is that the WFOC is a conglomerate, a monopoly, and an oligopoly, with complicated relationships and inter-connected associations. The sport called the WFOC is in effect the globalized product that all other parts gyrate around, creating an industrial sports complex.

The administration and its inner workings of the WFOC, the globalized product itself, are a study of complex relationships, with separate entities set up to accomplish specific objectives with titles signifying Administration, Group, Holdings, Management, and Promotions. The sport aspect is embedded in the WFOC Administration, almost playing a secondary role to its commercial value. It comes under consideration as an industrial sports complex because of its connectedness with other commercial, cultural, economic, and political parts outside the WFOC.

Ritzer (2010) echoes Smart by extending a composite of all global flows and structures that are applicable to the definition of globalization in general and of the sporting flows and structure of the WFOC as a globalized product. This further relates first to the commercial and later the cultural aspects found in this research:

“1. How *extensive* are the global flows, relations, networks, interconnections? Obviously, such phenomena have existed for centuries, if not millennia, but what is unique today is how much more extensive they have become. They now cover a much greater portion of the globe, involve many more global processes, and will likely grow even more extensive in the future. 2. How *intensive* are the global flows, relations, networks, interconnections, and so on? While these phenomena may, in the past, have lacked much intensity and, as a result, been more epiphenomenal, they are now much more central and important. This is due, at least in part, to the increasingly frenzied activity associated with these processes, as well as to the similarly intense attention to, and concern about, them. For example, many people today are virtually addicted to such things as e-mail to friends throughout the world and to social networking web sites that include participants from around the globe. 3. What is the *velocity* of global flows, relations, networks, interconnections, and so on? It is not just their extensity and the intensity that matters, but also the speed at which they move. It is clear that globalization brings with it, and is characterized by, increasingly rapid movement of virtually everything. Velocity is closely related to many concepts discussed above (and thereby closely related to globalization) including liquidity,

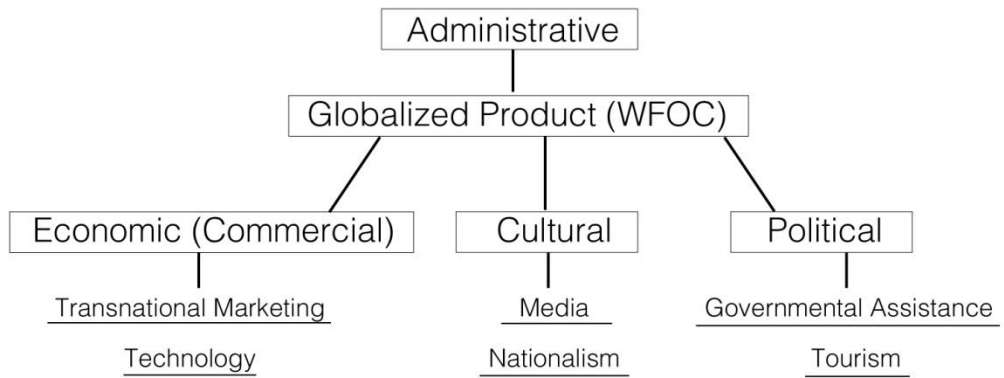
gaseousness, lightness, and weightlessness. Increases in any and all of these characteristics tend to lend to movement around the globe at greater and greater speed. 4. What is the *impact propensity* of global flows, relations, networks, interconnections, and so on? Again, while these processes may have had little likelihood of having a deep and widespread impact in the past the increasing propensity to have such effects is characteristic of globalization. Think, for example, of the huge global impact of September 11th because of the fact that it was known about, and even viewed, simultaneously throughout much of the world.” (Ritzer, 2010)

Ritzer’s questions above pertain to globalization’s extensiveness and intensiveness, and its velocities as measured by the commercial and cultural flows that are prevalent in its relationship to any world sport as a global product. Ritzer is acknowledging these impacts on globalization, which translates into world sport, and the WFOC in this thesis.

In this research it became readily identifiable that the WFOC complies first with the traditional hypothesis suggested earlier by the likes of Moore (1968) and others but ultimately with the contemporary make-up of globalization as brought out by Shrugan (2009). Applied traditional disciplines, basic in nature, would include commercial, cultural, governmental, industrial, political, and other inputs. However these subjects swiftly advance into intricate relationships in areas of greater particularization. This more specific framework is described as a non-traditional or contemporary globalized design. These simultaneous dimensions to WFOC globalization that feature in this research are illustrated in Chart 1:

Chart 1: WFOC: Geo Framework

The Globalized World Formula One Championship



2.4.1 Historical Growth and Development

Although the WFOC is a world championship, traditionally it was dominated by a European schedule, with some varied excursions outside the Continent. Less than 25 years ago, the schedule was more than 75% Europe-based. This has gradually evaporated the past two decades. Modern Grand Prix racing or Formula One was inaugurated in 1950, and during the relatively short period of time since then, most of the associated technology has originated in Europe and the UK in particular. Operating budgets, derived from undersized corporations or affluent individuals, were more often of European origin. Despite these limited early criteria, with meticulous public relations, the WFOC was widely accepted as a 'world championship' by the participants, world media and fan base (Reid and Sylt 2006).

Particularly during the past 20 years, the WFOC has transformed itself into a world championship of legitimate importance. Its status as a global sport, marketing vehicle, and technological source has propelled the WFOC to the forefront as a world Mega Sport and business. The WFOC today energizes nationalist sentiments to unprecedented levels in parallel with the World Cup and the Olympics, based on advertising revenue, live attendance figures and television ratings that will be emphasized in this report.

North America has enjoyed a long but tumultuous saga with the WFOC dating back to the middle of the 20th century in its modern history. The first Grand Prix of the United States was in 1958, the first Grand Prix of Canada was in 1961, and the first Grand Prix of Mexico was in 1962. These three nations, the largest in North America, are the only countries to host a WFOC event on the North American continent. Through the early development of the WFOC, there was always a measure of US-based technology involved with the series. This US technology was often unappreciated and not noticed by the onlookers, as much of it centred upon the tire and rubber industry and aftermarket products, e.g. spark plugs and related commodities. Marketing performed a relatively constrained role in Canada, Mexico, and the US during the foundational phase of the WFOC. Despite the occasional North American team or driver, North American nationalism frequently reverted back to its various European roots, meaning expats in North America supported drivers and teams from their countries of origin. North America was unique to the formative WFOC period because of its large immigrant population, who came from

places where Grand Prix style racing was an embedded theology or, for many, and for a better interpretation, a fanatical way of life. This circumstance remains consistent today and is further empowered by home-grown patriotism (Reid and Sylt 2006).

The first prerequisite of this study is to understand globalization in general terms and the second prerequisite is to understand globalization in all definitions as an industrial sports complex. This is required before the formal introduction and presentation of research on the WFOC to prove it a member of the most elite group. There is overwhelming thought that would suggest that 1. the WFOC is an elite member of the exclusive list of sports that causes it to be a real global partner in the industrial sports complex, and 2. North America plays an integral role as both a contributor and receiver of all aspects in the defined criteria. These two points become apparent and form the foundation of the research's framework.

2.4.2 The Contemporary WFOC

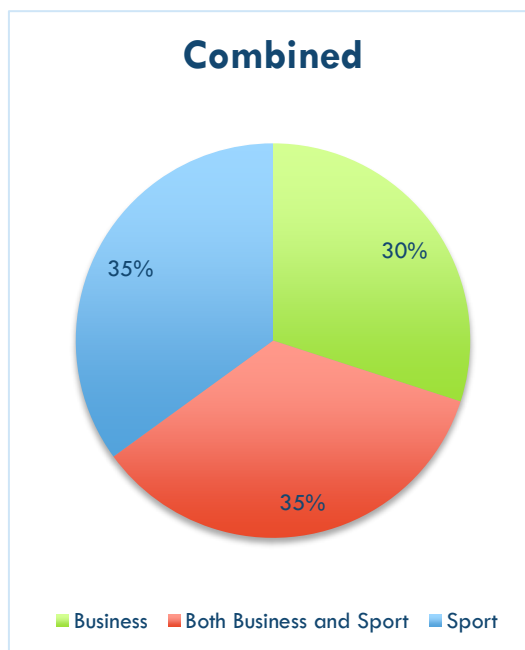
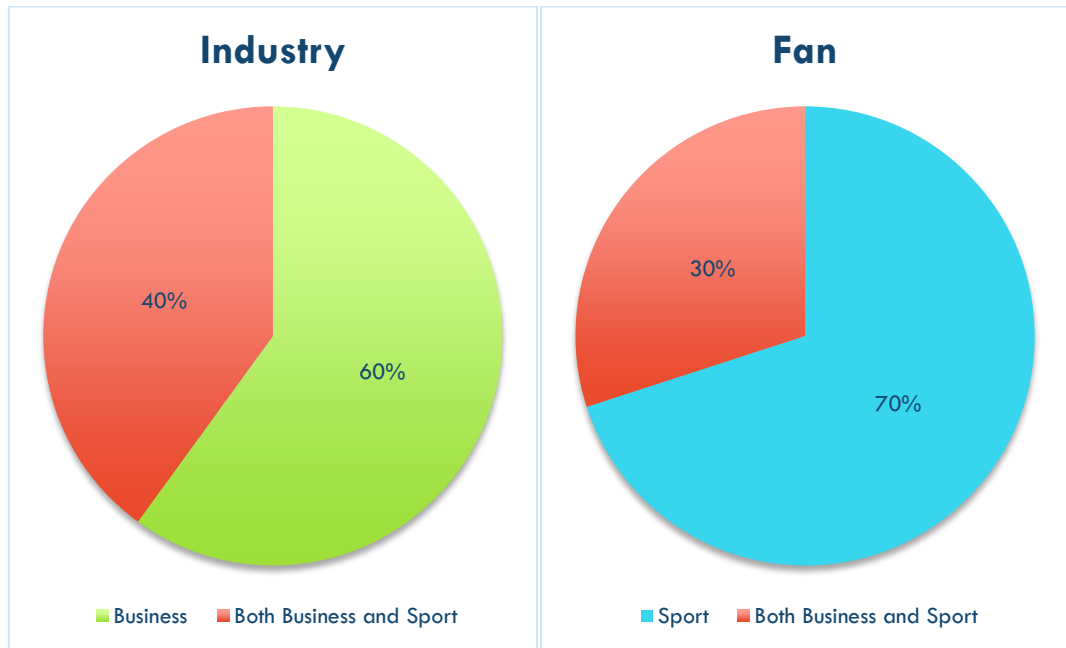
It is said the formal modern history of the WFOC began in 1947 with the establishment of the first World Driver's Championship; however, its first actual race was not until 1950. Between the late 1950s and early 1960s, North America became well represented with race events in Canada, Mexico, and the US, world-class drivers from Mexico and the US, and American technology being used extensively on the automobiles. The WFOC integrated more in North America during the 70s with increased participation and visibility, but also needed to survive constant challenges. There were instances of both American and Canadian drivers and teams from the mid-70s through the early 80s; however there was a lack of continuity in preserving a presence. While Canada consolidated its spot on the world championship schedule, the American race struggled to generate interest and a consistent location through the 80s and into the 90s. The Mexican race eventually evaporated by the early 90s and only recently restored to the schedule. However American technology remained largely uninterrupted throughout this entire period, leaving a perpetual existence of one of the championship's most weighted expenses.

In its modern history, the WFOC has produced three North American world champions: American-born Phil Hill in 1961, Italian-born American Mario Andretti in 1978, and Canadian Jacques Villeneuve in 1997; who was raised in Europe. There have been other world-class drivers from Canada (13), Mexico (4) and the US (55) who has participated in WFOC events with varied success and breeding different heights of nationalism.

The monumental reach and frequency to the populace of these attributed happenings (drivers and teams) caused attentiveness and augmentation when it coincided with the international economic occurrence coined as globalization and becoming technical jargon. By the end of the twentieth century and into the second decade of the twenty-first century, North American corporate sponsors, events, fan base, and personnel, have become mainstream and an indispensable fundamental component of the WFOC, bringing about the cultural, commercial, political, and technological inputs this report provides as evidence of a globalized industrial sports complex.

The composition of today's World Formula One Championship is uniquely significant because it conforms to consisting of both the traditional contents that define globalization and its more contained contemporary information. Chart 2 illustrates what the research learned in this regard by breaking down the differences between the fan base and those employed within the industry by defining contemporary WFOC as a business or sport:

Chart 2: WFOC: Sport or Business?



2.4.3 The WFOC and the Global Automobile Industry

Although it is difficult to evaluate whether the WFOC is a cost-effective advertising vehicle for the global automotive industry, there is little doubt that these corporations possess a great desire to be associated with the most proficient automotive championship. This research observed two levels of automotive industry involvement: 1) direct and 2) indirect.

Direct involvement would first include major automotive manufacturers that take a straightforward interest by participating with their own research and development to produce an engine or complete race car. Traditionally only Ferrari would qualify in this category; however more recently Mercedes and Renault bought customer teams (teams they sold motors to) that allowed them to move into the full manufacturer (chassis and motor) classification. Historically, most automobile manufacturers prefer to concentrate on engine production and make their engines available to teams that produce their own chassis. Honda moved back into this class in 2015, with McLaren. Today, Ferrari, Honda, Mercedes, and Renault all fabricate customer motors. These four manufacturers represent four different countries. Essentially all other automotive industries participate in the WFOC as direct suppliers, including exhaust systems, fuel and fuel cells, gearboxes, head protection, oils, rubber and tires, safety equipment, and wheels.

Indirect involvement is limited to automotive manufacturers, more clearly defined as engine makers. This arrangement takes place from time to time when an outside firm, namely a speciality motor manufacturer, will offer its engine to be rebadged with an automotive manufacturer as an advertising vehicle in return for compensation. Cosworth and Judd, both speciality shops of this sort, would be recent examples. In 2016, the Red Bull team retagged its Renault engine as a TAG, which is known as a watchmaker. Historically Ford would use a Cosworth engine for its clients rebadged as a Ford, causing no internal strain on Ford's own research and development departments.

The reason for automotive manufacturer marriages is to create the relationship or illusion of any given company and the WFOC as the pinnacle of all racing and its technology. These types of associations have tremendous advertising value with its global marketplace. The article "A Need for Speed" stated that approximately 60% of all global automobile race fans claim they follow the

WFOC scrupulously (Marketing Management 2007). In 2006, Synovate (2006), an international marketing research group, weighed responses from almost 1,600 motor racing supporters from six nations. The US was included in this significant study, but not Canada or Mexico. The research was designed to determine the leading forms of motor sport and related brand perceptions. NASCAR, a form of racing related to American street cars, was rated the most popular form of racing in the United States. A staggering 84% of all American race fans rated NASCAR as their favourite type of automobile racing. Worldwide, based on total television viewership, the WFOC was easily rated the preferred type of automobile racing. The Synovate (2006) study concluded that international motor sport is a powerful and mobilizing business and financial force. This force generates a powerful globalization of marketing campaigns equating to marketing cash. Brand loyalty was a weighty factor. An impressive 1/3 of those polled said that they are influenced by brands or corporations that are a sponsor of motor racing. This was expressively true in the two Middle-Eastern countries (Saudi Arabia at 49% and the United Arab Emirates at 53%) polled. Furthermore, over 1/3 of all respondents suggested they would be impacted by an automobile manufacturer's success in the sport when purchasing a new car. This response confirms the absolute reasoning why six major global automobile manufacturers have participated in the WFOC during the last five years alone. Past studies will have a significant impact on what is understood to date, but future studies will be integral to its present global context.

In an article specific to WFOC advertising, Verity (2004) notes that global sponsorship marketing deals nearly quadrupled in value from 1990 through 2000. The growth, according to Jenkins (2004), coincided with the time frame during which Formula One's popularity also quadrupled. This highlights a definitive link between sponsorship in general and the WFOC. Furthermore, it gives credence to the future of its increased coverage and continued popularity growth. Verity (2004) continues that the WFOC offers a new dimension for corporations seeking new ways to promote products outside traditional modes of advertising, i.e. print, radio and television. Verity concludes, "Indeed, some writers have argued that sports sponsorship will become the optimal positioning tool for international marketers seeking to communicate global messages" (Verity 2004).

Through the concept of sponsoring WFOC teams and events, corporations increase public awareness and corporate image. The goal is to alter public perception of positive brand preference, thus increasing product sales. Through hospitality, sponsorship builds international business relationships. This is all possible because of the mass globalization process it partakes. A typical example cited by Verity (2004) is Shell's sponsorship of Ferrari. This is one of the most powerful examples of global branding in existence today. In 2000, Shell's international executive management team reviewed the company's sponsorship long-term agreement with Ferrari. The existing contract, last formulated in 1995, was due for extension or termination. The executive decision was to be based on a dispassionate, quantitative and qualitative data-based evaluation of the apparent successful association. Shell's executive management determined that the sponsorship of Ferrari had an extreme positive effect on its customer attitude and behaviour. This was derived by database brand image marketing metrics known as Global Brand Tracker. Customers with an awareness of Shell's Formula One involvement had a higher brand preference for Shell. Thus, these consumers were found to be more likely to buy petroleum products from Shell. North America is an important marketplace for Shell and was included in this database. This was supported by another independent analysis by Brand Finance. This study determined there were positive benefits from this same Shell and Ferrari relationship. Additional studies were found and compared to form a genuine opinion (Verity, 2004).

Joachimsthaler and Aaker (1977) agree with the findings of the Shell executive management stating the Ferrari sponsorship is invaluable, finding that non-conventional methods of building brand relationships with global consumers are highly effective for companies like Shell and other international conglomerates. No doubt, motor racing is a highly non-conventional marketing method. This is because in world advertising terms, motor racing is considered a special event or promotional advertising. Special events and promotions, although becoming more mainstream and accepted, are considered unconventional advertising. Print, radio and television advertising are considered conventional forms of advertising. A look into non-conventional versus conventional branding by other global conglomerates involved in the sport will highlight this significance. No doubt, this observation will

be an important part of the research because of the many variables detailed within the whole global sport and global marketplace.

2.4.4 The WFOC and the Global Media

Approximately 280 full-time journalists and reporters, plus regional media members, cover each WFOC event. The addition of television talent and production crews pushes the principal number to as many as 2,500 full-time media professionals at each race, which signifies its global acceptance and importance as a Mega Sport.

Television plays the biggest role in the media capacity. Each WFOC race is televised to over 200 countries throughout the world, viewed by virtually 580 million people per season according to Levermore and Budd (2003). (Note: this total far exceeds the Jenkins estimate found elsewhere in this report). There is an obvious correlation between global television coverage and this immense popularity, regardless of which sport is being considered. Increased television coverage has allowed the opportunity for international events to reach virtually the entire planet. This signifies globalization's impact on entertainment and sport in general. In particular, global television brings the WFOC unprecedented global coverage. Today's television reach allots phenomenal coverage. Satellites can bring the world together virtually in an instant, says Sweeney (2007) in his report in *The Futurist*. Expanded television coverage of the sport has increased its popularity immensely worldwide. This is a strong argument that globalization has had a positive effect on the sport. Approximately 84% of all racing enthusiasts follow the WFOC through its television coverage. This compares to just 2% of that group that actually attend live race venues (Marketing Management 2007). While it becomes clear the WFOC contains major defining components of globalization, particularly in terms of commercialism and media, it is conceivable it was not reached solely through literature found in general explanations of globalization or literature of global sports. Although the inclusion of the literature is applied, in many respects the WFOC stands out as its own unconstrained entity, causing this research to take on a unique responsibility and evidence of its being an industrial sports complex.

Later, 019 (UK, corporate executive) will argue that television is the WFOC's biggest business plan, "Television is what draws the sponsors." In fact, television

is the common denominator of the success of all World Sport and particularly the three Mega Sport: World Cup, Olympics and WFOC.

2.5 Conclusions

If flattery is the greatest compliment than the theorization of this research shares consistency with a distinctive report collected by the *Sociological Review* (2006) titled "Sports Mega-Events". That special issue consisted of 10 individual papers that studied the role of sports mega-events in three basic categories:

"1) capitalist modernity, 2) glocal politics, and 3) as a feature of power, spectacle, and the urban environment. What is exceptional is that it concludes 1) the demonstration of the social (economic, political and cultural) significance of sports and sports mega-events, 2) the outline of the sociological and social scientific significance of sports mega-events, by reviewing research and debates about their impact from the disciplines of political science, human geography, international relations, economics as well as sociology, and 3) it suggests why sociologists and other social scientists should be interested in analysing them and asks what can sociologists and social scientists learn from analysing such." (Sociological Review 2006)

Concentration on these points allowed the research to build significant theoretical roads leading to the concept of a globalized industrial sports complex. This research proceeded on the following premises: 1) that the WFOC is established by its fans as a sport and by its industry as a business but as shown in Chart 2 over a third share the opinion that it is both a business and sport, forming a clear majority that the WFOC is a sport that is a business; and 2) that the WFOC has the unique characteristics of a Mega Sport, which further predicates it as a trans-national corporation; and lastly 3) these theories constitute the WFOC as a legitimate globalized industrial sports complex.

Chapter 3: Methodology

Chapter 3 describes and defends the research design of the thesis by first comparing available methods that can be useful to this research. It specifically presents the case for why a mix of quantitative and qualitative modus operandi best provides results for the research most effectively.

3.1 Research Design

A methodology is a way of thinking about and studying a social phenomenon. A collection of essential numbers can fulfil that definition in some research. Gorard (2001) suggests, “The purpose of sampling is to use a relatively small number of cases to find out about a much larger number”. If this assumption is correct, then this research can be based, at least in part, on quantitative analysis. This research did employ this method, by conducting a questionnaire at two North American WFOC events to supply genuine information not necessarily available elsewhere. This information, although a relative small quantitative number, as mentioned by Gorard, did provide useful empirical data. However, even Gorard admits that not all research is based on samples. Corbin and Strauss (2008) say qualitative analysis is, “A process of examining and interpreting data in order to elicit meaning, gain understanding, and develop empirical knowledge”. This definition gives credence to the idea that a qualitative analysis is an appropriate and integral method to carry out this research and will be favourably endorsed in this chapter. The WFOC is a social phenomenon that encompasses multiple academic disciplines, necessitating a research design that includes both quantitative and qualitative measures to ensure an absolute study.

3.1.1 Informed Research

There are two key qualities in obtaining material for a thesis: 1) to have access by being ‘embedded’ in that situation and 2) to be trusted by those providing the researcher with valued information. The WFOC, as an exotic territory, is perhaps like a situation described by Torrance (2007) in this regard: “Even as the “embedded” argument stresses the role of concrete personal relations and networks in generating trust, when interests need to be safeguarded in new and

unfamiliar settings such as in infrastructure equity investing, the scope of private governance plays a central role in creating the financial relationship”.

It is an objective decision to ascertain what constitutes an expert on a given subject. An expert is an authoritative figure probably best founded on comprehensive knowledge from experience; perhaps complimented by some relevant education.

My romance with Formula One began as a teenager when I manoeuvred myself in the unlikely summer position of ‘gopher’ which is more like ‘go-for’ of a F1 team based in suburban Chicago. At that time, Andy Granatelli’s STP March team ran Mario Andretti, a future world champion, in F1 races that did not conflict with his Indy-car schedule. The team literally airlifted its prepared car from Chicago to Europe to hook up with the factory March team prior each race it entered.

Later in life, I received a BAJ with a major in public relations from Drake University, a MSJ with a major in advertising from Northwestern University, and a MA with a major in geography from Northeastern Illinois University. All of these college degrees played a key and obvious role in this doctoral study.

After college, my first three professional employments were in marketing capacities with companies associated with Indy-car racing; including a stint with American entrepreneur Roger Penske. These experiences led me to start-up my own company named Omni-Communiqué Inc. which specialized in motor sport management, marketing and public relations; particularly in Indy-car with teams and sponsoring companies. Omni-Communiqué was responsible for several WFOC related endeavours; including: English-speaking ticket sales for the Mexican Grand Prix, packaging the F3 support race at the Grand Prix of the United States held in Phoenix, consultant to the historical Stanley-BRM F1 team, and management of a Porsche Super Cup effort that ran prior to WFOC races. Eventually, Omni-Communiqué expanded its operations to include additional sports: bicycle racing, boxing (Olympic-style and professional), ice hockey (college and professional) and others. Each of these experiences was integral in providing intelligent outlets to this research because access is essential to its purpose.

Omni-Communiqué was responsible for the first motor sport competitions between the former Soviet Union and the United States of which I was also a

competitor. As a driver, I made approximately 250 starts holding a Grade B international license and reaching Formula 3 status. In 2000, in cooperation with Volkswagen AG, I started up a company named Active Worldwide Sports which organized the first Formula 3 series to North America, as a stepping stone to Formula One, called the United States Formula Three Championship (USF3).

Lastly, some of my personal small cap mutual fund holdings are investors in the WFOC companies making me a very minor owner.

3.1.2 Groups

Groups give an integral strength to a research design, both quantitative and qualitative, because of the access and collection ability. Mendeley (2014) notes there are three kinds of groups, of which this research utilized two (the third being Focus Groups): 1) Survey Groups (questionnaires) and 2) Session Interviews (Mendeley 2014).

While it may first appear that the predominant interview groups that this research utilized (questionnaire and interview) are not associated, the research questions give evidence of their connectivity. There are two distinct affiliated complexities: 1) other groups or networks share involvement with a primary interview group, and 2) most primary and secondary interview groups have a direct or indirect correlation with nationalism.

Each principal group is also comprised of sub-groups where fundamental research questions are applicable and presented to each. The commercial group contains marketing and technology sub-groups, the political group includes government and the structure of the WFOC, and the cultural group includes the media, the fan base and the global corporate environment.

3.2 The Mixed Methods Approach

According to van der Roest (2015), "A mixed methods study is undertaken to evaluate the epistemological/philosophical, methodological, and technical levels of mixed methods design in sport management research". This research follows that formula; however, he continues, "The results indicate that mixed methods research is still rarely used, poorly legitimized and often weakly designed in this

field. Our conclusions lead to the hypotheses that the more central a research field is, the higher the prevalence of mixed methods, and that mixed methods only slowly trickle down from central to more peripheral sub-disciplines” (van der Roest 2015). This research would dispute his findings because, in this instance, the mixed approach offered a more inclusive finality to the analysis of a highly defined segment at this particular stage, producing a substantiated legitimacy. A composition being rarely used does not necessarily disqualify it, especially when it is capable of achieving a superior result (Journal of Mixed Methods Research 2015).

In defence of the mixed methods approach, it is reasonable to base this research on both quantitative and qualitative methods due to the multiple outlets of available information that will strengthen the results of this report. The findings of this research can theoretically be extracted from the systematic marriage of a mass structured questioning of relevant subjects and in-depth interviews with key informants in the WFOC industrial complex and associated industries and policy/regulatory organizations; all highly specialized subjects. This framework will capture the desired information in the cultural and industrial globalization of the topic to form an assemblage of primary data on the most contentious academic areas of the topic.

The quantitative and qualitative measures do not need to be weighted equally to achieve the desired result, and as this study becomes more defined it will be apparent that the research will increasingly be more reliant on the qualitative investigation. In conclusion, this research will experience a mixed methods approach but the qualitative analysis will emerge as the dominant factor in its scrutiny.

3.2.1 Quantitative Methods

One component of this research involved data collected from the consumers of the WFOC – the fan base. Given the number of events, and the diverse cultural and physical geography, the research centred its efforts on relevant events in Canada and the US. There was no questionnaire conducted in Mexico because no event was scheduled during the period of research.

To accomplish this measure, this research reached out to the roots of its fan base to establish a baseline of information using questionnaires. This was best achieved using this quantitative approach of the questionnaire to provide specific geo-based probing to understand the North American fan in comparison to the composite fan and other fans with individual characteristics throughout the world.

In consideration of sampling and the relevant demographics of the composite fan, a simplified designed questionnaire was implemented twice in this study, early and mid-term. The unsophisticated quantitative nature of the questionnaire did not hinder the quality of the sampling but, in fact, produced a more enhanced representation of collected data for those same reasons. The varied collected data proved to be absolute when derived from the size of the composite fan foundation and developed certain cultural themes that will be invaluable to this research.

Questionnaires were distributed at two North American WFOC venues: the 2010 Canadian Grand Prix at Montreal, Quebec (officially known in French as the Grand Prix du Canada), and the 2013 United States Grand Prix at Austin, Texas. The research was initially prepared to conduct 125-150 direct face-to-face interviews at each race. In finality, a lower number was accomplished at each targeted event: 78 at Montreal and 70 at Austin. The surveys were conducted in English and held in public areas near event entrances and/or transportation stations to and from the circuits.

The first section of each questionnaire collected primary information about the respondent. This information was used as statistical information to learn about the sampling for comparative reasons: age, citizen of what country, ethnicity (and in particular immigrant or of what generation), education level achieved, gender, and present income level. The second section concentrated on the direct cultural impact by the WFOC on this particular composite fan base. The questionnaire was impartial in collecting information and allowed for quick specific answers with the ability to be expansive. All acquired data was submitted as confidential. The interviewee had the option to include contact information for any later correspondence. There were slight variations in the questions between the two questionnaires; however this was to improve and simplify the second sample and did not affect the result.

Appendix II and Appendix III provide sample questionnaires from Montreal and Austin.

A slightly modified version of the questionnaire was also prepared for local WFOC race promoters, government officials, commerce officials, and local tourism administrators. The questionnaires were delivered by regular mail or email or conducted by telephone. Gorard (2001) says small samples are predictable but acceptable because of the logic of statistical testing using common non-parametric approaches. This theory was also applicable to the questionnaire applied to the fan base, however Gorard may suggest the need for more powerful parametric techniques to extract more comprehensive information from this core. This was a difficult challenge for the study because of the secretive nature of these groups, but it achieved adequate knowledge beneficial to the research.

In conclusion, it was determined that the quantitative approach exclusively was not an effective analysis for the purposes of this study for two distinct reasons: 1) the fan base was limited as a heterogeneous infrastructure to this study, and 2) a general reluctance to gain meaningful feedback from more knowledgeable qualitative groups by this method. However it was determined that the fan-based survey had some value for comparative analysis. Quantitative methods were accepted into this study to compliment and support the overall research but qualitative methods would provide the foundation of the findings of the inquiry. The quantitative results of the questionnaire are shown in Appendix V and Appendix VI where its comparative quality can best be understood in its totality.

3.2.2 Qualitative Methods

The design to best achieve meaningful results for this research is the qualitative approach because of its subjective ability to explain and compare. Corbin and Strauss (2008) identify questioning as the first analytical tool to gain qualitative knowledge. The research adhered to their four types of questions in gaining information: sensitizing, theoretical, practical, and guiding interrogatories. Corbin and Strauss (2008) stress the importance of comparative analysis for social science research and this study considered constant comparisons and theoretical comparisons in seeking its results. Questioning and comparison fixated on the

cultural, industrial, political and other dominant influences of the WFOC through interviews with professionals supported by certified data. The information derived by interview utilizing the Corbin and Strauss design best discovered the desired qualitative results of this research.

As previously distinguished, media and nationalism are outgrowths from cultural influences, and trans-national marketing and technology are by-products of the industrial revolutions; the political effects are also numerous, as 'political' can refer to both WFOC administrative and actual governmental aspects. These two elements work on opposite sides with the same objective of either providing or hosting a WFOC event. The WFOC, at its highest administrative levels, is essentially a political body that contrives markets and manages WFOC events as a corporate structure. In doing so, it must negotiate and coordinate with authentic sovereign local and national governments. The individual promoters of each event act as a 'buffer' or middleman between the two political groups. Local and national governments act as a positive function for their citizenship and the individual promoters also act as a profit-making entity in its end game. These are, in fact, the hidden treasures of information that will constitute this research.

Weiss (1994) says we interview to gain access to observations from others. Typically these are people we do not know, meaning there must be a high degree of trust in areas where the respondent may not be willing to always be open to conversation. Only an accumulation of interviews from various involved WFOC professionals and others will properly represent the qualitative portion of the research. These professionals were mainly gathered from among the WFOC industrial complex and WFOC executives. The interviews were also extended to race promoters, government officials, commerce officials, and commerce administrators. This assortment of actors captured the various cultural, industrial, and political components needed to compose a successful analysis. Weiss (1994) segregates panels of informants by events, an organization, a loose collectivity, and social institution that can best address gaining information and by seeking out key informants in these tracts. A key informant is a willing and knowledgeable person in a subject that can be non-cooperative. This study embraced key informants and, when possible, pursued additional wisdom with follow-up interviews. Some subjects were known creating a higher degree of trust.

Significant probing of key informants and all interviewees is required to extract relevant answers. Davies (2007) identifies two types of probe: clarifying probes and exploratory probes. Clarifying probes were used in the study to get the first reaction to a question and to resolve any ambiguity. Exploratory probes were used to complete or follow up an answer. This was sometimes done using a second connected question after the first question was initially answered or by a follow-up interview after the research learned other connected or disconnected information. Probing was not limited to the specialty of the interviewee and may have included cultural feedback which could be useful to the research.

Qualitative interviews were conducted face-to-face or by telephone or email, whatever means was available to assure joint accessibility. Each interviewee was considered to be highly knowledgeable or expert in their respective field. This subjective research consisted of 34 interviews of various lengths ranging from 15 minutes to 2 hours; some were followed up for additional questioning. Efforts were made to reach an equal representation from the various targeted sectors: administrative, cultural, economic, industrial, and political. Each interview searched for in-depth information for its qualitative value and comparison management in an appropriate format that would not violate the integrity of the interviewee and other sources of information. The list of interviewees broken down by nationality and respective profession indicating their expert status is reintroduced in Appendix IV. This list also occurs at the beginning of this research to satisfy its connectivity to some earlier comments.

Two additional types of qualitative analysis were considered for this research: 1) focus groups and 2) secondary data. A proper focus group could possibly produce fine qualitative results for this research because specific attitudes can be learned about the WFOC, global marketing, national identities, and related subject globalization from corporate, fans, government, and other individual input. However this idea was not pursued because focus groups are not as effective as interviews when profiling, sizing markets, or measuring marketing awareness and usage (Mora 2010). Secondary data, previously gathered by other reliable sources, e.g. Formula One publications, sports marketing reports and *Formula Money* performed a compelling role in this research. The latest industry news accumulated from weekly periodicals and my personal contact with WFOC 'insiders' proved vital

to provide up-to-date information to permit the research to accumulate, be accurate and timely, something not always found in the expert interviews.

In the final analysis, this research grasped the theorizing that the WFOC is an autonomous industrial sports complex through cogent qualitative methods. First, this research identified and resolved its fundamental composition to advocate the theory: a) the various intertwined administrative and political structures, b) the trans-national commercialized conglomerates and the marketing and technological activities that they embrace, and c) the mass complicated cultural exercises combining the interworking of human activity, nationalism and media influences. This empirical study embraced a mix of methods by integrating its efforts in collecting data via quantitative and qualitative designs with interviews bolstered by the questionnaires and the types of secondary and additional data identified above. These methods uncovered little-known and new insights on the significance of the WFOC as this theorized unconstrained global industrial sports complex. It was determined that only this strategy of a qualitative analysis based on collected empirical evidence would best serve this purpose.

The qualitative design in this research is meaningful because much of it is dependent on authoritative investigation of relevant subjects in all associated disciplines. In consideration of its originality and detail, this aspect indicates the strong substance of the research. It is conceivable that additional expert opinion would enhance the study further and the lack of it may be thought of as an area of weakness. Like the results of the interviews themselves, this is subjective, as a decision to become satisfied was justified.

3.3 Pilot Study

Pilot studies are devised to test methods on a smaller scale prior to conducting the actual research. This pilot programme, conducted early in the research, was designed to address both the quantitative and qualitative features as separate but dual integral tools of the research.

A sample questionnaire was prepared and tested in the field at two WFOC events during 2007. In these trials, 25 questionnaires were assessed at WFOC events at Montreal (Canada) and at Indianapolis (USA), both held in June 2007.

The two questionnaires were in English, which was politely received at both locations. It took a simple form, with multiple choice answers only with the option to elaborate. All approaches were direct between the contact and me. The trial was not predominantly designed to obtain data but to provide the opportunity to enhance the actual research questionnaire by indicating ways it could be better managed. It was learned that there was a need to facilitate a technique to allow for more detailed responses to make the research more thorough. Overall the response was well received and manifested a new understanding between the correlation of globalization and the sporting aspect at the quantitative level.

The strategy of the questionnaire was to secure basic information to test access and availability to transform and heighten the data. Respondents to the questionnaire came from a wide range of demographics. At Indianapolis about half were from the US, with a significant balance from Asia and South America. At Montreal there was an equal distribution between Canadians, citizens of the US and various Europeans. The most dominate age groups were 33-46 and 18-32 respectively. There was an approximate 3:2 ratio of men to women. In both instances, basic income level was self-described as middle-income or above average income. Other interesting features included questioning how far the respondent had travelled to the WFOC event and how often they attended a WFOC event. Education and type of employment were not measured in the pilot.

A series of focus groups was initially considered instrumental to the qualitative aspect of this research. Focus groups would allow for in-depth individual feedback into the research that would not be gained from other forms of acquiring data. The research first favoured a traditional focus group utilizing a single or dual moderator to ensure full topic coverage. A focus group may take a client participant focus group approach if necessary or if it can prove to be of more value. Depending on the participants, the focus group can be divided into mini focus groups or work as a larger whole group. These decisions can be made at the time of the group activity because they should not affect the outcome of the focus groups. The objective remains to acquire detailed personal opinions, regardless of group size. A major concern when conducting focal groups are tenancies to be biased and explosive. It was finally decided that using focus groups would not be beneficial to

the research because personal interviews would provide increased material information.

The qualitative sample of personal interviews was conducted directly by the researcher with professional subjects from mostly Canada, Mexico, and the US to use the perceived high qualitative value of expert dialogue. It was understood that professionals from other nations would be added as the research progressed to consider a more globally accepted account. These trial interviews were conducted by email, fax, letter and/or telephone in whatever form of communication was acceptable and convenient for the respondent. All correspondence was in English, as that would be typically agreeable for global professionals in the sport. Each interview was adjusted to ask basic pertinent questions related to the specialty of each professional: for example, different questions were prepared for a WFOC race promoter than a FIA administrative official. Questions were basic in character to adapt for guidelines, extensions and limitations of content. Overall there was an enthusiastic response from those interviewed, which validated the subject for research. The actual research interviews featured more intensive questioning and were expanded to professionals in commerce, government, manufacturing, marketing, tourism and other globalization tangibles that represent the qualitative angle of this research.

The approach used in the interviews was straightforward, with an initial identification of the person. Subjects were selected representing the three North American nations that have a history of WFOC race events. All professional subjects were male and at least 50 years of age. There was a certain consistency in the questions asked, but answers varied according to the respective professional concerns of each individual. It could be concluded that qualitative viewpoints can provide an excellent standard of information when the interviews are enlarged to additional subjects.

The data collected from the pilot questionnaires and interviews indicated there was substantial information available to conduct a successful research project. The test trial questionnaire further revealed that a larger sample would promote a more cogent outcome. In consideration of effectively reaching respondents in the field, clear and concise questions would best facilitate the research questionnaire with the option to enhance any reply. The interviews would

be more subjective and wide-ranging. The policy of this research was to search for complete answers to questions with the ability and opportunity for supplemental input. The final implication is that the value of this research is dependent upon both quantitative and qualitative analysis.

3.4 Limitations

The University of Southern California Libraries (2014) defines the 'limitations' of a social science research paper as characteristics of design or methodology that impact or influence the application or interpretation of the results of your study. It says, "They are the constraints on generalizability and utility of findings that are the result of the ways in which you chose to design the study and/or the method used to establish internal and external validity" (University of Southern California Libraries 2014).

It further states the importance of four points 1) always acknowledge a study's limitation, 2) acknowledge the study's limitation as an opportunity to suggest additional research, 3) acknowledge an opportunity for the researcher to demonstrate critical thought into the study, and 4) claim the limitations of the research is a subjective method that is evaluating the any weaknesses in the study. This research made every effort to abide by these recommendations.

All studies have limitations, and descriptions of possible limitations are divided into two parts: methodological limitations and conceivable limitations by the researcher. Methodological limitations can be created by sample size, lack of available dependable information, lack of prior studies on the particular subject, the measures to use the collected data, and the unreliability of self-reported data, including exaggeration. The researcher may be limited by access, time effects, cultural and other bias, and fluency and translation in another language. A piece of research is not necessarily affected by all possible limitations, but certainly any research carries some obstructions.

This research experienced four types of limitation: 1) bias, 2) withholding of information, 3) unavailability, and 4) quality of information. The first two, bias and withholding of information, were more prevalent in the research.

Two kinds of bias limitations were detected: industrial bias and cultural bias. Industrial bias concentrates on the competition between corporations involved in the marketing and technological aspects afforded in the WFOC. Cultural bias is more apparent because of the trans-national companies involved, and more significantly, the composition of the fan base and the multitude of nationalities involved. Bias will be discussed in Section 3.4.1.

There are four elements in the WFOC that are, in part, secretive and do not always disclose full or truthful information: the WFOC administration, corporations involved in the WFOC, governments, and participating teams. These elements are typically keen to make positive information available to the public but generally hesitant to discuss matters of difficulty, failure and financial content. These kinds of situations make it difficult to extract more desirable data. In simplistic terms, these elements will tell you something but not everything, because much vital information will remain undisclosed until it is made publically available. The research attempted to obtain as much sensitive knowledge as possible to overcome such hindrances, often from underlings with access to certain information (direct but not from the first or highest source).

Unavailability is somewhat related to the withholding of information. This is particularly true of the WFOC administration, and to a lesser degree, governments. The top-level officials of the WFOC make it difficult for researchers to contact them because of the concern of negativity that may be the result of an investigation. Governments, although obligated to be 'open' to their tax-paying citizens, prefer to be in control of the release of their public information. Corporations are normally eager to 'float' information through their public relations departments but not so much from the engineering department. Quality of information is always a concern in any research, but may be overcome by persistence and cross-referencing existing information.

The methods applied to the integral chapters and sections position this research as providing accurate genuine knowledge. In its finality, the fact-finding mission was satisfied with the standard of excellence and variety of its collected data to confirm a strong research project.

3.4.1. Bias and Conclusion

Bias in this research is defined as different degrees of favouritism and considered more of a prejudice for rather than against. It was found to be rampant in this research, yet is understood and accepted because of the competitive nature of both the business and the fan base of the sport. The strongest source of bias identified existed in nationalism. The most prominent aspect of nationalism was supported by fan enthusiasm for a driver of the same ethnicity, with the exception of fans supporting Ferrari. These biases are obvious, not movable, and not necessarily taken as 'serious' or as an absolute fact but considered in terms of a target market. There is professional bias in the different business platforms, but this is observable by the constant change of rivalry between manufacturers, products, and teams. The image conveyed is 'we are the best' rather than 'you are not on the same level'.

Collected quantitative and qualitative data can be breached and biased. While the quantitative part is a huge part of this research, Gummesson (2005) makes a clear case for the consequential design/methodology/approach, as it is, "underpinning the discussion is that complexity, ambiguity, fuzziness, chaos, change, uncertainty and unpredictability are characteristics of a market economy; that qualitative and subjective interpretation is necessary to add the spark of life to marketing data; and that general marketing theory needs more attention from researchers". His applicable findings are that the "quantitative and qualitative research processes are not by nature antagonistic, although their advocates may be; quantitative methodology carries qualitative 'bugs', necessary for its sustenance" (Gummesson 2005).

Going forward, the next three chapters of empirical data followed by their interconnectivity in the seventh chapter will form the response to the applied theories and methodologies employed in this research. Bias in this thesis can best be located in the three chapters that dictate the research:

- Chapter 4: This chapter concentrates on administrative and political consequences where it can be assumed 1) self-inflicted bias exists towards all departments of the WFOC administration in any and all intercourse it may engage in with entities outside its own composition, 2) self-imposed favouritism is dominant towards Bernie Ecclestone in his position as a 'czar' of the WFOC administration,

and 3) political structures in power will assert themselves in the position to contract a WFOC event until there is a public outcry and/or a backlash that would eliminate its position in government. The WFOC itself has, at times, been accused of its own bias towards favoured drivers, partners, sponsors, and teams and discriminatory towards others.

- Chapter 5: Bias, however limited, continues to exist in the technologies area, however not insurmountably enough to cause anxiety. There is solitary minimal interest in the origin of commercialized business or technology with only isolated mentions.

Some bias was detected amongst some British subjects who took a protectionist position of the sport and its supporting vast cottage industry located in the UK, stating outside interference was not needed for the WFOC to be successful. This position was detected in several members of the racing fraternity.

However, British expatriates located in the US seemed to back the idea that American technological ingenuity was not only of significance but also dominant in certain key compartmentalized sectors. This thought was also extended to some commercialized sponsorship.

A small amount of more extreme bias was detected by American businessmen who are involved directly with the WFOC in either a commercialized or a technical partnership role. These Americans generally felt that input originating from the US was unknown, not promoted, and/or not appreciated, despite it being a major contributor. At the same time, this dissatisfaction can be categorized as mild. These same subjects felt their role was largely substantial in their respective categories as opposed to a general assessment.

Overall, there was a relative lack of interest in where sponsorships or technology in the WFOC derived from. American business involvement was considered the best-kept secret in the sport. It is not intended to be secretive, but a need exists to advance the message because there is a clear suggestion of hefty embroilment. It is concluded that 1) commercialism and technology found in the WFOC are the chief benefactors of its claim as a globalized industrial sports complex, and 2) the United States is a major player in this claim because of its incredible 'hidden' entanglements helping to create bias.

- Chapter 6: Bias runs amok with all culture and nationalism no matter the topic. World sport, in general, produces insurmountable bias and the WFOC is no exception. There is no argument that this inquiry has demonstrated that culture and nationalism is a breeding ground for bias.

While nationalism can be exaggerated at times, it can be seen and felt. The WFOC, in its global environment, is where nationalistic bias is realized and compared in many places inclusively and beyond into other areas.

Locating nationalistic bias is relatively obvious in the WFOC: the British love Button, Hamilton and McLaren; the French love Grosjean and Renault, the Germans love Mercedes and Vettel; the Italians love Ferrari; the Spanish love Alonso, and so forth. In the end, nationalistic bias is also rampant in North America and its WFOC associations: Canada awaits its next F1 pilot with great expectancy and hosts unquestionably the best-organized event on the schedule; Mexico is passionate about its two WFOC drivers, Gutierrez and Perez, and has welcomed its triumphant return to the schedule; and the US is confident in its commercial and technological contributions and to being considered the only nation able to possibly host two WFOC races. It becomes indisputable that the North American nations are in the forefront of nationalism and bias in the WFOC.

Chapter 4: The World Formula One Championship Administration and Its State of Affairs with Political Structures

The administration of the WFOC and its particular actors are the principal 'players' in how this enterprise is organized and behaves. This exclusive group itself is a political entity of sorts that conducts its business with other sporting authorities, commercialized businesses, and governments at all levels to achieve its objectives in tandem with all others concerned from the top down.

4.1 A Secretive Business

This research suggests that the WFOC is considered by many to be a 'closed' club of world elitists, an international coalition of select sporting business people, and a private global enterprise. The general public and 'insider' perception is that the WFOC is controlled by an intimate administration which is controlled by a single person and requires secrecy. While this perception may prove to be true, there is little doubt that the WFOC is also a large holding company with multiple functioning departments. It is this status as being privately held that validates its lack of openness.

The Merriam-Webster online dictionary defines 'secrecy' as "the habit or practice of keeping secrets or maintaining privacy or concealment" (Merriam-Webster, Inc., 2006). Bok (1982) describes secrecy as "intentional concealment". Those definitions are straightforward and widely accepted (with minor modifications) in most fields, including military, computer security, economics, political science, and homeland security. Tefft (1980) extensively surveys secrecy from various perspectives, including "comparison with privacy, the politics of secrecy, secrecy in business, and bureaucratic secrecy".

McCarthy (1988) notes that the very successful mega entity Bechtel Corporation has long been regarded as the most secret company in the world. Bechtel is regarded as a testament to the success of secretive business practices and may be the model for many privately owned entities. Pooley (1997) counters that secrecy does not guarantee the exclusivity that a given owner seeks, limiting its perceived value as a business practice.

According to Leeds and von Allmen (2004), owner behaviour originates from the fact that “most, if not all, owners of professional sport teams have made substantial fortunes in other industries,” which, considering anti-trust laws, etc., causes a shroud of secrecy. In the case of the WFOC administration, its ownership, although not a team, acts in the same way.

The WFOC administration wields extensive power over most of its organized complexity (see below) parts, which can explain its passion for protectiveness or desire for secrecy. The team’s relationship with the WFOC is protected by the terms of the Concorde Agreement; which guarantees the conditions of the WFOC. The Concorde Agreement is a contract between the WFOC administration and its participating teams that determines how licensing, television, and prize monies are distributed. There have been seven such agreements since 1981, the last being in 2014. These conditions include the physical properties of the events and the financial returns for their participation. The WFOC is highly defensive of these terms because of certain apparent favouritism. The WFOC is careful not to portray itself as something predicated, thus it often resorts to secrecy. Teams, in essence, do not race for winnings but for a percentage of all monies produced by the WFOC based on their individual perceived importance and value to the WFOC, i.e., Ferrari receives a far greater percentage than a second-tier team such as Sauber, etc. The exact figures are unknown because that would indicate the total amount of income generated by the WFOC annually. Silt (2013a), in the last known estimate, believes the group as a whole produced \$1.523 billion in income in 2011. Technical partners are an essential part of the teams and are courted into the WFOC with less restriction because of the need for this type of discipline. In consideration of the nature of technology, secrecy plays an important role in this department because of increased espionage in the area of research and development. Commercial partners are welcome to participate in the WFOC for financial considerations which can be excessive and prohibitive. Commercial partners have options with the WFOC properties, teams, drivers, television, and promoters to utilize the reach and frequency available. All of these kinds of entities would prefer a minimal amount of exposure in regard to their financial spending. Governments, being a public concern, must be the most transparent of all partners, but offer little cooperation

on their workings with the WFOC. This position is likely because of the extravagant amounts of taxpayers' money that may be allocated to attract a WFOC event to a particular region. Bribery is an element that can exist in any World Sport, and such illegalities can influence corporate and government officials. The 2015 FIFA soccer scandals are evidence of this kind of corruption. All of these compounded parts are components that require secrecy. WFOC administration, teams, and technical partners subscribe to the definition and the justification for secrecy.

Tefft (1997) would refer to the behaviour of the WFOC administration, WFOC teams and their technical partners as "outright secrecy". Tefft's explanation of outright secrecy directly coincides with the WFOC administration's behaviour: "... the mandatory or voluntary, but calculated concealment of information, activities, or relationships" (Tefft 1997). It would seem there is some theoretical precedent of secretive behaviour, as indicated by the WFOC administration, in other global businesses.

The WFOC is a collection of international entities, all of a private existence, that inter-react with each other to formulate a globalized industrial sports complex with a shared need of privacy and secrecy to protect their interests because of the large amount of monies spent and the way in which revenue is shared.

There is no actual price tag for holding a WFOC event, making it difficult to extricate its real profit margin. It seems even some of the top soldiers have no idea what the Formula One Group actually charges to stage a WFOC event. 011 (USA, FIA executive) told this research, "I am not sure how much it would cost today but I would imagine somewhere between \$30 and \$50 million. Really it's if Bernie [Ecclestone] really wants the event. He wants to make the most money he can but he is willing to bend to go somewhere he wants to go. You need to have a circuit that meets all the standards of a Grand Prix. That can cost another \$100 to \$200 million".

002 (USA, SCCA executive), in general terms, would agree, "Assuming you have a race track that is acceptable to Ecclestone and the FIA, I would think all the fees can add up to \$25 to \$50 million".

Today's highest-ranking American official, 024 (USA, FIA executive), expanded somewhat: "It varies by location but in general terms, figure on a FOM

fee of \$15 to \$35 million, a FIA calendar listing fee of \$240,000, an ASN fee of \$200,000, and the event cost, for example insurance, operating, security, and more". Formula One Group and FIA fees combined approach \$0.5 million. With event costs, including promotion, it is reasonable to assume a total cost of approximately \$100 million to host a WFOC event.

Journalists were most consistently pragmatic in this research. 003 (USA, journalist) said, "Nobody can say for sure unless you are part of the agreement, but roughly between \$25 and \$40 million for the sanctioning fee, another \$2.5 to \$5 million for travel expenses for non-European races, race operations will cost between \$0.5 and \$1 million per day times a three-day weekend, marketing can run between \$0.5 and \$2 million, administration, pro rata, is \$2 to \$10 million per year, and miscellaneous expenses". This essentially doubles the number, revealing a further cloud of concealment.

026 (BEL, corporate executive) answered, "There's not a published amount. A figure I've heard is approximately \$50 million". One can assume every individual race is negotiated at a different fee depending on the place and time. Corporately, this alone signifies a high degree of secrecy.

015 (UK, F1 team engineer) as a hands-on F1 race engineer, stated confidently what he felt the costs were, "As far as I am aware it costs around \$30 million to put on a GP, but this varies wildly from country to country due to infrastructure. Bernie [Ecclestone] asks for around \$18 million for the FOM, meaning himself, and controls and keeps all the TV rights and advertising from which he pays teams, staff, race staff people like Charlie Whiting and others, etc. The organizers have to recoup all their finances from ticket sales, parking, and vendor sales I believe. Now local government usually kicks in the rest for the economic benefit to the regions".

He continued further on the subject, "One example is the FIA has made it clear that it wants, or one might say needs, more cash from Formula One because its original deal that was struck did not provide enough. Bernie Ecclestone has been unwilling to give the federation the kind of money that the clubs would like to have. If I may paraphrase Joe Seward's blog, 'given the revenues of the Formula One Group are around \$1.5 billion a year, the FIA's request for a rumoured \$50 million is not a huge amount, amounting to no more than a three per cent tax'. Still,

those involved in F1 tend to be rather keen to create tax-efficient structures and so there has been resistance to giving the FIA any more, unless it is willing to make more concessions to the Formula One Group” (015).

020 (MEX, FIA executive), a successful businessman in Mexico, was also a past promoter of the Grand Prix of Mexico, and offered a secretive perspective, “As I heard from the organization, in the case of Mexico it would be \$50 million, but I don’t know if it’s different than any other country.”

The fact is that nobody has an exact handle on costs but the starting cost is consistent at about \$50 million for the fee alone. It is largely accepted as a secret but according to Sylt (2013b), the WFOC brought in total revenue of \$1.5 billion in 2011, of which \$512.1 million was from race fees. There were 19 races in 2011, thus an average of about \$27 million per race. By comparison, Sylt (2007b) estimated a fee of approximately \$20 million a race in 2007, based on revenue of \$329 million received for 17 races. Traditionally, all North American rounds have paid more in race fees than the average. Between 2006, and 2011, the team’s prize money doubled to \$698.5 million.

This research found it difficult to access revenue information, thus it operates in various components of secrecy. Despite the information from the expert interviews, it was difficult to pinpoint an exact number clarifying revenue. The research proceeded with Sylt and Reid’s chart of revenue generated in 2007, as the best and most complete example of the true annual income of the WFOC (see Charts 3 and 4). Undoubtedly it has increased since then in actual fee cost, by the number of events, and the other estimated source of receipts received. The concluding fact is the Formula One Group, overall, conducts its behaviour as a secretive business.

Chart 3: WFOC: Revenue

F1's Estimated Total Revenue Generation 2007

Category	Est. Revenues 2007 (US\$)
Team owner spend	\$1,470m
On-car team sponsorship	\$834.2m
TV rights	\$380m
Race sanction fees	\$329m
Ticket sales	\$280.5m
Trackside advertising	\$164.25m
Paddock Club	\$140m
Customer engine supply	\$100m
Sponsorship of TV broadcasts	\$80m
Tyre supply	\$72.6m
Off-car team sponsorship (mostly supplier deals)	\$68.85m
FOA sponsorship, including video game license	\$68m
Driver sponsorship	\$32m
Other	\$300m
Total	US\$4,319.45m

Source: Sylt and Reid (2007: 11)

Chart 4: WFOC: Expenditures

Formula One Administrative Accounting 2005

Formula One Administration		2005 (US\$)
Turnover		786,566
Cost of sales and admin expenses		323,357
Operating profit/loss		463,209
Profit/loss before tax		434,849
Retained profit/loss		312,686
Employees		204
Wages and salaries		19,470
Average salary		95
Net book value tangible fixed assets		21,168

Source: Sylt and Reid (2007: 11)

4.2 Complicated Relationships

The most complicated relationships in the research are best identified within the structure of the WFOC administration itself and the network of its entangled relationships with various other political structures. This is a two-step approach to best understand the make-up of how the WFOC actually happens. There is an absolute consistency in the research that 1) the WFOC itself is a highly complicated business structure, and 2) the WFOC's relationships with different political structures further complicate the process which brings about the definition of the WFOC as an industrialized sports complex.

Tsoutsoura (2004) suggests businesses become complicated because corporate responsibility is pressured by financial performance, which strongly explains the Ecclestone formula used to administer the WFOC.

The first task is to consider the nature of the corporate structures that underpin the contemporary WFOC. The companies that manage the umbrella entity known as the World Formula One Championship are considered to be an organized complexity complex. By eliminating the science, simplicity, and unorganized complexity from the equation, Weaver's (1948) explanation of organized complexity takes on applicability to this precise definition. Weaver defines organized complexity as a correlated interaction of parts that allows a system to emerge. All of these properties in the emergent model can vary in size and some elements of the parts may behave on their own, not dictated by the system. However, there is an unqualified presumption that it is the emerging system that becomes the organized complexity in the pre-eminent outcome. I want to argue that it is useful to conceptualize the WFOC as an organized complexity. We have prepared a visual display (see Chart 5) to offer the reader a systematic comprehension of why the research determined that the WFOC is surrounded by complicated relationships.

The first organized complex system determined in this research is the administration of the WFOC. This will be further defined in Section 4.6. At this juncture, we describe the complexities that arise from the WFOC. The WFOC is a generic name used for this research. There is no formal entity known as the World Formula One Championship per se. The administration of the WFOC is a prime example of Weaver's (1948) theory because it is the origin of this entire industrial

sports complex. The defined parts of the WFOC administration constitute the overarching framework system in which all other compounded systems rotate as do the planets that orbit around the sun. The components that caused the WFOC and its administration to originate would include any property associated with its ownership. These separate entities responsible for the WFOC operate under the name Formula One Group (FOG), which is accountable for all WFOC revenue. At this time, the FOG is controlled by the Delta Topco holding company that represents its shareholders. The immediate owner of the FOG is SLEC Holdings. Alpha Prema (AP) represents the ownership, of which CVC Capital Partners Group (CVC) is the majority owner with a 35.5% stake. An investment company, Waddell & Reed (with Black Rock and Norges Bank) is the second largest stockholder in Alpha Prema, and Bernie Ecclestone maintains a minority interest of 13.8%. Ecclestone is President and Chief Operating Officer of two of the most significant companies under the jurisdiction of the FOG: Formula One Administration (FOA) and Formula One Management (FOM). FOM is the principal operating arm of the WFOC and is responsible for event organizing and broadcasting. Formula One Promotions (FOP) manages advertising and licensing. The perplexingly named Formula One Promotions and Administration (FOPA) handles prize monies paid to teams (not drivers). It is Ecclestone's objective to float a public offering of the FOG on the Singapore Stock Exchange with a value of \$10 billion with much of the stocks sold coming from creditors.

The research identified two distinct rationales for why complex systems are utilized by the umbrella WFOC: 1) the corporate rationale, and 2) what can be termed the 'Ecclestone' rationale. The corporate rationale is to allow all the moving parts in the system to function and conform to change. This concept permits the FOG to adapt to all conditions and prosper and profit as a corporation. The 'Ecclestone' rationale is more personal, focusing on liability, other legal aspects, and maximized financial gain for his Alpha Prema entity through accounting measures for his family and himself.

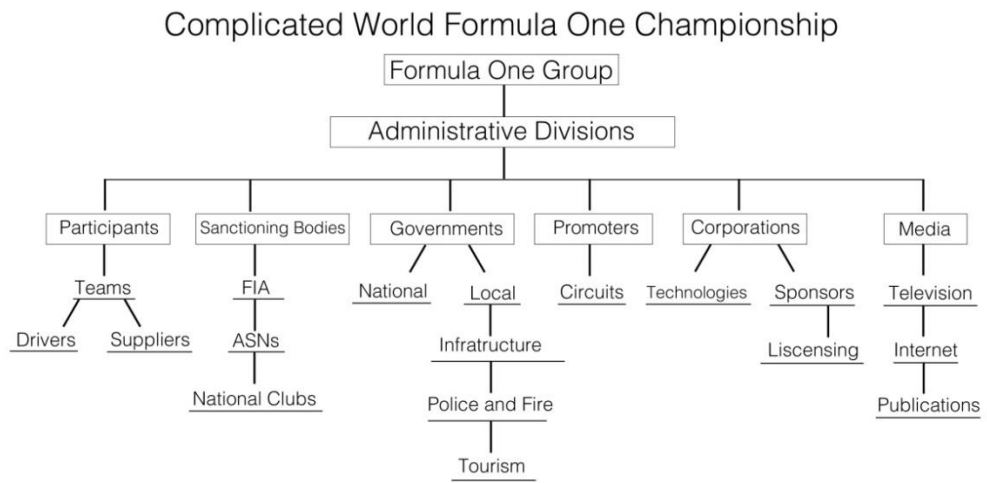
Lucas (1996) supports Weaver with his own description of complexity, "In essence a complex system is a functional whole, consisting of interdependent and variable parts. In other words, unlike a conventional system, the parts need not to have fixed relationships, fixed behaviours or fixed quantities, thus their individual

functions may also be undefined in traditional terms”. In his own analysis, Lucas considers a vast number of complex systems that are apropos to the other WFOC systems, including connectivity, transition, operation parallelism, interaction variability, control ability, external boundaries, and system function (Lucas 1996).

A key component to the organized complex system under Ecclestone identified in this research is the participants of the WFOC. This system is the aspect most visible to its audience, and its parts generate other interests that will be recognized in the commercial, cultural, and technological sections of this research. The parts have been identified as the teams, drivers, technological partners, and commercial partners. The participants of this exclusive complex group include the membership of the Formula One Constructors Association (FOCA), the Formula One Teams Association (FOTA), the drivers in good standing with the Formula One Drivers Association (FODA), the multitude of trans-national corporations that provide technical support to the constructors and teams, and the large number of international companies that invest commercial monies into the teams in exchange for marketing opportunities.

Chart 5 offers the reader a systematic comprehension of why the research has determined that the WFOC is surrounded by complicated relationships.

Chart 5: WFOC: Relationship Structure



The sanctioning bodies forms another dimension to the organized complex system. The sanctioning bodies derive the rules and regulations to be utilized by the WFOC in sporting terms. This is the responsibility of both the Federation Internationale du Automobile (FIA), and, to a lesser degree, the Federation Internationale du Sport Automobile (FISA), and its committees assigned to the WFOC, of which the World Motorsport Council is the most dominant. Other examples would be the FIA Judicial and Disciplinary Rules Committee and the FIA International Tribunal. Although deemed to be its own autonomous system, it is difficult to separate its independence from its not-far-removed relationship with the ownership of the WFOC. These world sanctioning bodies rely on and work with national sanctioning bodies to collaborate and function effectively. The involved national sanctioning bodies found in this research are: the Automobile Competition Committee of the United States (ACCUS); a group of automobile clubs representing the US, the Authorite Sportive Nationale Canada FIA (ASN Canada FIA), a general agency organization representing Canada, and the Organization Mexicana de Deporte Automovilistico (OMDAI), which acts as an arm for the FIA in Mexico with an extended association with other clubs in both Central America and South America.

The individual race promoters create another organized complex group, but each promoter acts according to their own circumstances. There is little connectivity with this system because these promoters work directly with the FOG administration, bypassing sanctioning bodies in the actual negotiating of event placement. By working with the highest level of WFOC management, race promoters have access to other concerns, including marketing and television, within the sub-divisions of the WFOC, and the sanctioning bodies after agreement with Ecclestone's people. An exception would be the need to have contact with local or regional government because government is an integral mechanism in the financial planning of an event. The promoters of the Grand Prix of Canada and the Grand Prix of the United States are more likely to conduct business directly with the WFOC administration because these two events represent countries geographically isolated from Europe requiring special considerations. This includes financial considerations, making organizing events in North America more palpable, underscoring WFOC's need and preference to be in North America.

Government, in terms of real politics, is a further piece of the organized complex system, which can be national, regional, or local. These governments will typically work with the race promoter to achieve 1) obtain public monies to ultimately generate regional business in association with a WFOC event, and/or 2) tax relief. Hotels, restaurants, and small businesses are typical examples of businesses that can capitalize on events and generate tax monies. Local and regional governments are characteristically keen to build or upgrade infrastructures to make events more accessible and provide the public with additional benefits outside the event itself. The WFOC administration will also often intervene with this cooperation to assure governmental agencies of its resources for bringing about a successful venture. Federal governments in rich or third world countries are more apt to cooperate with race promoters or the WFOC administration in these capacities. National governments in both Canada and the US have shown little or no interest in this kind of support, as these enterprises are considered to be private endeavours. The provincial and city governments, the Province du Quebec and Ville du Montreal respectively, have cooperated with the promoter of the Grand Prix of Canada and the WFOC administration to guarantee the event at the Circuit Gilles Villeneuve on the Ile Notre-Dame. The State of Texas, Travis County, and the City of Austin have made similar guarantees to establish the Grand Prix of the United States at the Circuit of the Americas.

Corkindale (2011) acknowledges the importance of organizational design and structure: "Poor organizational design and structure results in a bewildering morass of contradictions: confusion within roles, a lack of co-ordination among functions, failure to share ideas, and slow decision-making bring managers unnecessary complexity, stress, and conflict". It is perceived that the Ecclestone organizational model is complex but also well-designed and structured, rendering it successful. History has shown that the WFOC's ability to adjust to change corresponds with Corkindale's conclusion that organizational strategy, structures, roles, and functions must be realigned with new objectives that are altered by globalization and economic crisis. The addition of races in India, Malaysia, and the Middle East at the expense of traditional events in Europe exemplify the WFOC administration's openness to change. The WFOC's knack to of 'charging' more

monies to countries with extensive budgets for an event is also apparent and attributable to this change (Corkindale 2001).

It is conceivable that some may not consider these relationships as complicated, but this would fall short of reality. "Our dealings are very straightforward with Bernie [Ecclestone], almost to the point of being exclusive," responded 001 (CAN, FIA Executive) dispelling any idea of a complicated relationship in this more isolated opinion.

Regarding secrecy, the Formula One Group is also not an exception as a complicated business: the varied required relationships give evidence in the form of an elaborate model.

4.3 Inter-Connected Associations

Inter-connectedness is an accepted term that is understood globally that employs the theory of oneness or 'all is one and one is all'. In terms of a business structure, internal connections between its parts act as a single object. An example of a high degree of inter-connectedness is the banking industry, because all large, universal banks act together in incontrovertible unison. World banks collaborate with the International Monetary Fund, which is an organization of 188 countries that foster global monetary cooperation and secure financial stability by facilitating international trade. Like the WFOC group, Wolf (2004) notes world banking also requires privacy, "The IMF has been a secretive and arrogant organization, though both charges are far less applicable today than they were a few years ago". These links cause all big banks to rise and fall together and ultimately affect all small banks worldwide. (International Monetary Fund, Overview 2014).

Morgan (2002) is a proponent of inter-connected business associations because "transnational communities are emergent properties of the internationalizing of economic activity". He specifically states that "1) the development of multinational companies, 2) the development of international regulatory bodies, and 3) the development of cognitive and normative frameworks through the practices of business education, management consultancies and other global professional service firms" (Morgan 2002) are the essential components of forming inter-connectedness.

The Morgan definition of the modus operandi of inter-connectedness, on its own reduced scale, also exists both within the WFOC administration and between all the parts that collaborate to create the WFOC.

The WFOC administration, based on its successful market implementation, is a well-structured model of inter-connected parts that designs the cooperative operational centre that conducts all WFOC global business. These essential parts include, but are not necessarily limited to, the partnership with the capital trading company CVC, Formula One Holdings Limited, Formula Management, Formula One Promotions and Administration, and various holding companies for the Ecclestone family. They act as a tightly connected consortium motivated by substantial financial gain.

King (2014) stated, “The concept of ‘connectivity’ of information in a business context acts to bring together the different parts of a business in recognition of the interconnections between them. It forces a new kind of behaviour—what we call ‘integrated thinking’”. The WFOC is made up of these classifications of inter-connected associations, each decisively something different yet contingent upon each other. Each part is an integral sector that acts independently yet in inter-connected concurrence with the WFOC Administration and with other indispensable components of the actual WFOC. Some of these associations are confined within the framework of the WFOC. Other associations are independent of the framework with a particular function. These integral inter-connected associations include: multifarious government departments; global, national and regional sanctioning bodies; research and development sectors of technical partners; commercialized companies with marketing ambitions; promoters and cultural influences. Each of these modules performs to its own objectives that can differ significantly yet with a certain harmony that affords the very existence of the WFOC and its inter-connected structure. This connective design is apparent and necessary to its function and operation.

4.4 Identifying Control of the WFOC Administration

This research conducted a survey of WFOC thirty ‘insiders’ and asked the question: Who controls the WFOC? Twenty-eight out of thirty respondents answered Bernie Ecclestone, with no provisions. “Everybody in Formula One

knows Bernie is the governor,” pointed out 015, the former Grand Prix racing engineer. Two out of thirty responded Bernie Ecclestone with the CVC Capital partnership. There were no responses exclusively of CVC, which is the majority shareholder of FOM. No other party or association was mentioned.

The survey asked the follow-up question: Is Bernie Ecclestone good for the WFOC? Fifteen out of thirty said Ecclestone is good for the WFOC, attributing its growth and popularity to Ecclestone’s foresight and management style. Fifteen out of thirty said Ecclestone was not good for the WFOC, citing that his control and monopoly was not fair to the teams in particular. Five of those who responded Ecclestone is ‘not good’ indicated further that he was ‘dishonest’, ‘a crook’, or ‘a thief’. Ecclestone has been the subject of numerous lawsuits and, in 2014, paid a large fine to end a high-profile trial in Germany for bribery.

There was no clear indication of what areas involved in the WFOC found Ecclestone either ‘good’ or ‘bad’. A government official, a race team member, and a company marketing manager, etc. could equally agree or disagree within its scope. There is an irrefutable perception that Ecclestone controls the WFOC administration directly at most levels and indirectly at others.

4.4.1 Global Monopoly

Coase (1972) implies a firm’s durability may be dependent upon itself to become a monopoly. Under Ecclestone, the WFOC has proven durable in its modern history because it has acted and controlled itself as a business monopoly of the highest echelon of its sport. In actuality, it is unique in this category.

Ecclestone’s ascent to power began in 1981, when as a WFOC team owner; he lobbied other teams to sign an agreement to secure their interest in the sport. This agreement became universally known as the Concorde Agreement. Subsequent agreements and revised editions of the original Concorde Agreement assured the teams of prize, sponsorship, and television monies. By 1988, he had sold his team to focus his energies on the sole management of the fledging FOPA. The modern WFOC was born and orchestrated by Ecclestone during this time span into the global industrial spots complex we know today. Ultimately, Ecclestone seized control and established his holding of the WFOC.

The general consensus of when a monopoly exists is when a specific individual or economic venture is the only source to deliver any particular goods or services. Formula One is a commodity and the Formula One Group is the only such provider of the FIA Formula One category. Ecclestone's holdings and control of the WFOC categorically imply a global monopoly. He holds both partial ownership and control of an entity that is the highest echelon of world motorsport. There is no immediate challenge to the WFOC on the world stage or any continental or national platform.

011 (USA, FIA executive) left no doubt that the WFOC is a global monopoly, "Formula One has no competition at the top or as a world championship. Formula One is the premier category for competition automobiles and for world-class drivers. There are other world championships but they are not the best cars or drivers compared to Formula One. They are also somewhat controlled by Ecclestone as well". Here, 011 indicated Ecclestone's ability to control some of the other categories by causing competition with his prioritized interest.

In fact, Ecclestone is the end-all to any WFOC race agreement, as 020 (MEX, FIA executive) attested, "There must be an agreement with Mr. Ecclestone to hold a Grand Prix". This is an actual confirmation of the monopoly, as this participant would know as a high-level and reliable source. He continued, "Everything is done in accordance with Mr. Ecclestone. The expenses for receiving a Grand Prix start with the evaluation of the conditions and availability of a track and the entire infrastructure on it. In Mexico we made a new track surface, built a new control tower, and pits as well as new grandstands for 100,000 spectators (at Ecclestone's insistence). The expense for these facilities could reach around \$20 million (based on costs in the early 1990s). On the side of the organization, expenses and FIA permits the amounts can reach another \$15 million per year. All the activities and the personnel of the committee can't be afforded by the budget alone. The support for the race can't be paid. This is done by volunteers and the government". Here, 020 confirmed Mr. Ecclestone's control of the WFOC and its relative markets.

Stiglitz (2005) argues that monopolies are a failure of globalization. "Globalization has unleashed a new potential for anti-competitive behaviour that may be harder both to detect and to curtail". "Globalization of monopolies requires

a global competition law and a global competition authority to enforce it, allowing both criminal prosecution and civil action in any case in which anti-competitive behaviour affects more than one jurisdiction. This does not require the dismantling of national competition authorities” (Stiglitz, 2005). Motorsport publications have reported that the British government’s Monopolies and Mergers Commission has yet to successfully investigate the internal mechanisms of the WFOC administration, despite numerous attempts. The ability to circumvent investigations underlines the power of certain monopolies like the WFOC.

Wolf (2004) might suggest that corporations can be in opposition to globalization because large trans-national companies and privatization are often proponents of monopolies. This can indicate that the WFOC’s relative size and ownership supports the idea of a monopoly. “The bottom line is that corporations have influence, but not decisive power. Moreover, many other forces have influence in contemporary democracies” (Wolf, 2004).

It would seem that Ecclestone and the ‘private’ WFOC administration that he controls would prove Stiglitz wrong and be in agreement with Wolf’s approach and constitute his monopoly of the WFOC as a globalized industrial sports complex. The complicated model probably attributes to its strength because it incorporates, in most cases, governmental influence.

Television, as the entertainment medium that exposes the WFOC into homes, fuels much of the global monopoly. Sylt (2013a) says the WFOC is the most-watched annual sports series in the world, with over 500 million viewers in 2012. He adds that broadcaster fees totalled \$488.9 million in 2011, which was 32.1% of the FOM’s total revenue. This revenue allowed greater pay-outs to the WFOC teams, which receive about 63% of the overall profits. During the last growth period of the WFOC, television played an integral role in its global popularity, which contributed to the increased power and size of the monopoly.

4.4.2 Oligopoly by Sector

The various structures of the WFOC and their respective moving parts confirm that it also constitutes an oligopoly. It is apparent that a monopoly and an oligopoly can co-exist in independent existence, as in the case of the WFOC entity.

An oligopoly is formulated by a number of smaller entities to control a market form. This is sometimes accomplished with collusion to reduce competition. Oligopolies are often connected to privatization and do not always carry a negative connotation. It would be a reasonable academic conclusion that the framework of the WFOC administration can be both a monopoly and an oligopoly, with a positive implication. This assessment is based on its success in fending off competition by building a strong corporate archetype with tangible inter-connectedness.

This definition of a sector oligopoly can be employed in two distinct applications: a) all the smaller entities that come under the control of the WFOC administration, and b) all the autonomous individual companies and political structures that collectively come together under the influence of the WFOC administration.

Stigler (1964) can be used here to point out that the WFOC's oligopoly may be some sort of collusion because the real goal is to be monopolistic, homogeneous, and profitable.

Another knowledgeable American journalist, 007 (USA, journalist), believes the WFOC is an oligopoly and weighed in, "The Formula One Group is a host of different companies, each designed to perform its own role in making the World Championship take place and there is no question that Bernie Ecclestone is the engineer of it all". This would also suggest that it is an oligopoly and monopoly based on accepted definitions of both.

The Formula One Group agrees with the definition of an abstract oligopoly: "The Formula Group company structure may look like a complex cat's cradle but navigating it is far simpler when bearing in mind the reoccurring corporate dimensions ... and (company-by-company functions)" (Reid and Sylt 2007: 12).

It is apparent at least one American journalist agrees strongly on this assumption, as 003 (USA, journalist) said, "Ecclestone and his companies accommodate this all. As a whole they allow both the commercialism and sport to exist. The Ecclestone companies are the facilitator that connects competitors and commercialism". Again, this adds credence to the belief that the WFOC is an abstract oligopoly based on its accepted definition.

The numerous smaller entities that work in direct collusion under the WFOC administration would include Formula One Holdings Limited, Formula One Management, and Formula One Promotions and Administration. The governing bodies Federation Internationale du Automobile and Federation Internationale du Sport Automobile both work directly with the WFOC administration but independently as functioning oligopolies. A sub-category would exist for smaller entities that work in an indirect cooperation with the WFOC administration. This ancillary group would include the Formula One Drivers Association, the Formula One Constructors Association, and the Formula One Teams Association.

The sponsoring trans-national corporations, the world drivers, teams, technological research firms, various governments and their agencies, promoters, and all forms of media comprise an oligopoly of entities integral to the concept of this globalized industrial sports complex. Support cottage industries act as a further sector component of teams, technology, and manufacturers. Although each has an established necessary connection to the WFOC administration, each has its own particular strategy and objective. This collection of individual entities is imperative to the success to the WFOC because each performs a function that is distinctly specialized and in demand by this globalized industrial sports complex. The WFOC administration controls this oligopoly but does not manage it, remote of legal considerations, rules, regulations, and financial obligations as they may be applied to each part and circumstance.

Its people are the most important and influential of this oligopoly because they provide integral skills and services. This includes engineers like 015 (UK, F1 team engineer) who revealed it is about more than employment: "For us it is our job. It is also our love". Love of Formula One on all levels is a common denominator that is unchallenged. There are no dissenters in the WFOC, as every trusted component of this oligopoly has a vested interest in it.

4.4.3 Teams and their Sovereignty

The teams that compete in the WFOC are all independently owned and operated. The sizes of the teams differ greatly, from small companies, like Manor and Sauber, to divisions of large conglomerates, such as Daimler Benz, Ferrari

and Red Bull. The era of small privateer teams has transformed into the former, as is the case with Williams and McLaren. There is a need for the WFOC to maintain an entry of at least 9 teams (18 cars) to be a legitimate world championship by its own definition. The obligations of the teams are a tremendous demand, considering the enormous financial conditions and infrastructure required by each to compete. The Formula One Group provides guaranteed payments to ensure these teams are able to operate.

The Concorde Agreement is the contract between the FOG and the teams. This contract provides the financial arrangements and guarantees provided by the FOG to assure participation by the teams, or 'the show'. It also includes the rules and regulations enforced by the FIA on the teams. The Concorde Agreement, which is sometimes revised and/or updated, is the mainstay of the teams' existence and capability to perform at the highest levels. The suppliers to these teams are also private and range from small speciality shops to large corporate structures, with an automotive manufacturer providing engines being a prime example of the latter. The suppliers act outside the Concorde Agreement but must comply with the rules and regulations of the FIA. Some of these suppliers may be in partnership with the FOG as a controlled category, such as tires, wherein all teams are required to use the same tires.

What remains consistent is that these teams and supply houses, while all sovereign, all are essential moving parts of the Formula One oligopoly. To assure its product quality, the FOG makes certain commitments to these teams, thus guaranteeing the independent team participation element of the WFOC.

4.4.4 The WFOC Compared to the World Cup and the Olympics

It would be difficult to rate the three Mega Sports identified in this research because they are hugely successful yet massively different.

011 (USA, FIA executive), is a former president of the Automobile Competition Committee of the United States (ACCUS) and high-ranking Federation Internationale Automobile (FIA) official, and offered his view from a F1 perspective about which sport is the preferred Mega Sport. He does not believe Formula One can ever be stronger than the Olympics because of decision-making.

He said the Olympics are run by very good organizations while in Formula One a single person, Bernie Ecclestone makes most of the decisions. He favours organizational decisions in world sports because of effectiveness. He also feels the same about the World Cup, noting its strong global committees (this was before the scandals of 2015).

He said the WFOC must also contend with the political atmosphere of the FIA. He noted at one time the FIA was working with the Olympics about the inclusion of motor sports, most likely rally cars, but potentially complicated the WFOC inclusive with the Olympics. This highly informed former racing executive said race drivers are athletes because racing is physically and mentally demanding, and compared it to bicycle racing. He believes there is nothing like Formula One and it cannot be compared to the Olympics or World Cup because they are all very different and it is not fair to compare them. However, he feels this research is correct to include the WFOC as a Mega Sport with the Olympics and World Cup, calling these events the Big Three. While some may question the survival of the WFOC, Olympics, and World Cup in times of global economic failure, 011 is confident because these events do not affect all people and there will always be commercial and government support for mega events like the WFOC, Olympics and World Cup. The researcher sensed that despite his high positions in motorsport, 011 would rank the WFOC third of the three Mega Sports in its overall global appeal.

014 (MEX, OMDAI executive) is a past marketing executive with the Grand Prix of Mexico and presently works for its sanctioning national body. He believes at this point in time, Formula One in Mexico has a greater following than the World Cup, "We never experienced great successes with soccer in my lifetime that I know of. That would be fantastic if we did and maybe bring the same level of pride [as F1]". He feels the same about Olympic participation and when Mexico hosted the Summer Olympics in 1968, "Mexico has never excelled in the Olympics. There is always passion but pride comes with something more. Something that is good. Formula One does that for us right now".

4.5 The Role of Governments

The function of government in sports, mainly events, is a heated controversy in both public and inter-governmental opinion. In the WFOC, governments have been involved in supporting events with public monies, but also financially supporting drivers. Today, government's role seems unavoidable, according to Barrie Houlihan (2014), "In the last ten years or so there has been a considerable growth in interest in the relationship between politics and sport, the role of government in sport, and the way sport is organized".

Houlihan believes the growth first comes from top leadership at the local governmental level, calling it uncoordinated and frequently inadvertent growth, but noting, "The growth in the significance of local authority involvement has been recent, rapid and accomplished without the benefit of a statutory foundation of mandatory services on which to base bids for central government funding" (Houlihan 2014).

In the context of the intense competition to gain the most spectacular events, sport, in general, has enlisted government involvement at various levels. It has become an unfortunate necessity for promoters to offset costs. Governments are attracted to major events because of their ability to increase revenue for businesses through tourism and governments through the taxation of sales that follows. This makes for conditions to improve public infrastructure to host bigger events. The WFOC has been the beneficiary of the government involvement concept.

In general, government involvement in the WFOC Championship can exist at four levels: 1) federal or national, 2) state or provincial, 3) county, and 4) city. The ideal situation would exist when all branches of a given governmental would cooperate in an event, financially or in-kind, but this is not practical, since most governments act differently. Each situation would offer a separate argument reflective to the individual nation and its governments.

Federal or national-level government participation typically has been limited to third world countries or rich kingdoms searching for a modern identity and connection to Formula One. This is not an objective of the presently involved North American nations or their governments, thus precluding this kind of participation.

Formula One events in Canada and the US have always been undertaken by private enterprises, further making federal injection of monies unlikely. Past Mexican ventures followed the example of federal money injections and there are strong indications that any future Mexican WFOC event may attract interest at the federal level as that country strives for greater global acceptance. Federal tourism departments are already participating in sponsorship of Mexican drivers in the present WFOC as a prelude to a Mexican Grand Prix with an influx of federal money.

011 (USA, FIA Executive) told this research of regular instances in which provincial or state governments are entwined with the contemporary development of WFOC. First, grants, loans and tax benefits at the state or provincial levels of government were found to be commonplace in both Europe and North America. The Province of Quebec has had an active role in first acquiring and then maintaining the Grand Prix du Canada in Montreal since its inception in that city. While not all US Grand Prix races have enjoyed state support in the past, the present race in Austin has received monies from the State of Texas. A separate state agency was established for that purpose and the state dedicated a substantial sum of money to the event, despite public opposition and legal hurdles. A second US Grand Prix in the State of New Jersey is to be included at an undetermined time in the WFOC schedule but the state is prepared to allocate significant funds to assure the event as a tourist attraction in its close proximity to New York City. Monies available at this level are significant and imperative, according to officials and fans alike.

He, 011, also told this research that county and city monies and/or services have been more consistently available to WFOC events in North America, and he felt this to be a more important form of involvement, because of its longer-term commitment despite the lower total dollar value. The Ville du Montreal has been a valuable asset to every Grand Prix du Canada since its onset there. The city's tourism office promotes Montreal as a year-round destination based on its WFOC race. The City of Austin and Travis County played an equally huge role in its first two Grand Prix in the US. City and county governments routinely combine to provide two very crucial services for their respective events: 1) building infrastructure to allow the movement of people and equipment to the event site,

and 2) providing personnel for traffic control and other logistics. New infrastructure would be needed for a race in Mexico and could be used in the future, which can make for a popular government decision.

Governments are keen on the WFOC because of the commerce it brings to a given city or region, including the wealthy Principality of Monaco. “Prince Albert of Monaco was once asked to rate the contribution of Formula One to the principality on a scale of one to 10. He gave it a 15”. The reason is obvious: it brings millions in Euros to Monaco (Huei 2007).

It was learned that it is not unusual for the various branches of government, particularly state, county and city, to function in inter-connected harmony to allocate and contribute funds to bring about a WFOC race. The Tri-Partite Funding Agreement between three levels of government has guaranteed the Grand Prix du Canada in Montreal since its inception, as the best example of WFOC events. The governments included certain federal agencies, the province (Province du Quebec), with the administrative region (Urban Agglomeration du Montreal), and the city (Ville du Montreal). A similar arrangement exists for the US Grand Prix in Austin between the state (State of Texas), county (Travis County), and city (City of Austin). It is evident that different government motives can operate effectively if there is a conjoining prosperity.

Canada’s highest-ranking motorsports official, 001 (CAN, FIA executive), weighed in supporting the idea of the purpose destination. “The Montreal race is a very popular event with the fans and teams alike, Indianapolis (when it was the Grand Prix of the United States) was less so. Since many of the sponsors of F1 teams are major corporations with global interests, it is very important to have exposure in North America, which is a major market for some of them”.

Governments elect to spend public monies on a Grand Prix event for one specific reason, as Canadian promoter 006 (CAN, F1 promoter) explained: “Mainly because the race brings in so much money to the local economy”. He is a proponent of this government support: “It’s very important because without it the event would not have been saved in 2010”. 006 continued, “But it has to be weighed and contribute to generate income locally”. He acknowledged it is needed and works in their case study, “We receive monies from the Montreal and Quebec

governments. Not enough to run the event. No. But these monies are needed to guarantee the event takes place”.

It is noted that a ‘Tri-partite Agreement’ existed through 2014, between the federal, province, and city governments combined to give a \$15 million contribution annually to the Formula One Group to assure the Canadian Grand Prix on the schedule each year.

The Canadian governments involved arranged for a common interest firm to facilitate government functions in this capacity. 006 (CAN, F1 promoter) added, “Octane is a private company that is contracted by the City of Montreal to organize the race”. This was probably done to limit civic and political responsibility.

009 (SIN, government official), when quizzed about his government’s involvement, responded, “The Grand Prix is really the decision of just one man, the president. If the president wants it then he just does it and everyone in government supports it”.

This concept is very different from most places the WFOC visits, so the Singaporean 009 explained further: “The past president wanted this race and the new president wants to continue its tradition. There is no parliamentary discussion. The president just makes the decision to spend the money”.

However, the reason for the vast expenditure ultimately is the same, “Maybe first for his ego but really to put Singapore on the map,” said 009. “There are great efforts to make Singapore a global business power. Singapore is a great port and a great banking centre. These are the entries of Singapore globally”.

Tourism is always an imperative part of every Grand Prix, and especially for Singapore as a destination: “The Grand Prix is a huge success, bringing large segments of vacationing people to Singapore for the first time. All the hotels are full. Restaurants are crowded. The atmosphere makes the Grand Prix popular with locals too. It is a revenue maker for most local businesses,” 009 told this research.

Many governments are favourable to contributing to WFOC events due to the financial benefits they deliver to a region. Singapore’s *Asia One* reported that the United States Grand Prix in Indianapolis had an economic impact close to \$1 billion annually from 2000 to 2007. A global market research study by AC Nielsen suggested the first Chinese Grand Prix in Shanghai in 2004 was worth \$525 million

of benefits for property developers, hotels, tourism, advertising and others (Huei 2007).

Minister Mentor Lee Kuan Yew (Singapore) said in 2005, that it was a 'stupid decision' not to hold a WFOC race before its inaugural event in 2008. "Look, pay attention to all this, this is what will make Singapore buzz" (Huei 2007).

Much like Monte Carlo, the Singapore circuit is held on public roads. "Every September the race takes place around the Marina Bay at night which is very beautiful. The city and state work together to make the circuit on the roads much like in Monaco however it is a national event," continued Kuan (Huei 2007). Infrastructure, a municipal improvement, often needs to be upgraded for a WFOC event and carries long-term benefits enjoyed after any given event, making government approval for such expenditures more palatable.

There are instances where it is not possible to avoid some type of government involvement. The Italian journalist from a major motorsport magazine 030 (ITA, journalist) explained one such circumstance: "The circuit in Monza is inside a municipal park so every Italian Grand Prix has fallen under the influence of the municipal government in Monza. The proper name of the circuit is the Autodromo Nazionale Monza, meaning it is the national circuit".

The research observed that outside the US, the availability of monies was largely dependent upon political philosophy. Progressive or liberal governments were more likely to allocate government assistance than traditional or conservative governments, as was particularly evident in Canada and Western Europe. This does not necessarily apply to the oil-rich countries, China, Russia, and others.

Oil kingdoms offer a dissimilar perspective on government undertaking. 008 (USA, television) told this research that it is common knowledge that sheiks in places like Bahrain and Abu Dhabi simply sign checks to get a WFOC event. A counter view of this would be other nations not influenced by oil money. He further commented that varying governments inject different amounts of money: "The Australian Grand Prix uses lots of public money. It's very controversial there. The city and province if that's what they call it accumulated over \$50 million in losses for tax base exposure". He noted that it is concerning when an underdeveloped country like India or Mexico allocates government funds for the Grand Prix. India

was often cited in this regard but he said this is not always the case: “The Indian government does not look at the Grand Prix of India as a significant public event so there will be no monies. It is a private promoter who will either make or lose money,” concluded 008 on this subject. It could be said that for a rich kingdom, money is not an obstacle; for a progressive nation, monies are available, but not without opposition; and in some nations it is strictly a private endeavour. The latter two carry risk.

014 (MEX, OMDAI executive) thinks Mexico, as a developing nation, differs from other developing nations like India. “Mexico offers a whole set of circumstances than other WFOC locations. Mexico is poor but offers its people, its culture, its beauty, and the economic opportunities. Mexico shares with India the same passion for a driver (or a race) in the championship. I believe Mexico has a far greater passion for the sport”. In essence he justified the passion of the people as an antidote to the government help Mexico receives.

Governments in North America, particularly the US, are decidedly different from other world venues where governments may freely become financially active. 011 (USA, FIA executive) injected his personal sentiment: “I don’t think the federal government should be involved with many things and certainly not racing in America. It’s OK for some countries, but not here. There is enough commercial involvement and that should do it. The problem you see is too much goes into that part of the economy that has nothing to do with it. Commercial involvement is the way to go”.

Government involvement is not essential to gain an event, but 011 pointed out that typically reasoning will prevail to support the government input theory because of the perceived advantages, “It’s hard to justify when people are walking away with billions of dollars. Great Britain is a good example and they will too. It’s really the home of F1. The government there has been reluctant to put federal funds in but in time they must. Silverstone will eventually be a government complex. It will be Silverstone University with all industries and proving grounds to support the infrastructure of Formula One”.

013 (USA, corporate executive), whose firm was involved in F1, summed up the typical American response to government spending, “Our society is based on free enterprise. Government should not be spending

money on this. Not in America anyway". This includes hotels and restaurants that are private and should not reap benefit from public expenditures, in his opinion.

In the end, many governments are favourable to contributing to WFOC events primarily due to the financial benefits they deliver to a region. The WFOC is an expensive endeavour for most private enterprises, and government monies are needed to attract a Formula One race to its borders. This is philosophically considered an accepted win-win situation in modern World Sport.

4.5.1 Tourism

Tourism is the most common justification a government uses for its involvement in supporting a WFOC race. Tourism is the source of generated monies that come into a local economy from an event. There are numerous American opinions on whether tourism is a reasonable function for government.

Sports tourism is one of the fastest-growing segments of tourism, according to Kurtzman (2005), and he agrees governments use tourism as the rationale for allocating public monies to attract sporting events. He further notes there are no geographical boundaries to this concept and governmental participation can be found at all levels: local to federal.

Nationalism and pride emerged as an important component of tourism, "Motorsport's elite will usually find their way to Formula One, but there is an increasing tendency for nationalism in the sport". When elite is used as an adjective opposed to a noun, this pride becomes specifically true of oil-rich kingdoms on the schedule. Mexico often connects its culture and vacation zones with its pride and nationalism in this report (Horton 2012).

The phrase 'the jury is still out' applies to the American demeanour on the subject. 002 (USA, SCCA executive) spoke of when tourism makes sense for a government to inject monies, "It is not a problem in many places like kingdoms and some countries. The Montreal race always had some local government help [to promote tourism]. It's unheard of here. Maybe some tax breaks. I think Indianapolis got something to keep its race. Texas is [was] working on something with the state and city but you will never see

the federal government getting involved here. The county was building some roads there [to move people in and out]. We've seen that here in the States at other race tracks that are not Formula One". He believes a WFOC can make a given place, the US race at Austin in particular, into a tourist destination, "It could be if it's run back to back with Montreal or New Jersey. Then you will see true F1 fans make the journey to see two races instead of one. They need to schedule this right to get tourists here. America has so much to offer as a vacation place". However in the end, 002 did not think governmental tourism agencies should promote their respective races: "I don't think so because these are F1 fans. The challenge is to get Americans out to watch. This is something the race promoters need to do on their own. It's not a government function in my opinion".

003 (USA, journalist) viewed it as more of a necessity: "It's not a question of government injecting public funds. Some form of government is necessary for a new F1 event to take place due to high sanctioning fees. The economics of promoting a F1 race or building a new facility is not sufficient to attract private investment alone. While there was much hand-wringing about the State of Texas funding mechanism for the Circuit of the Americas as to whether there should be government support, a better example of the governmental decision process is the support which the local province and national governments provided for the continuation of the Grand Prix of Canada in Montreal. In contrast, these same entities were not enthralled with continuing support for the NASCAR Nationwide race at the same circuit two months after the Grand Prix. The governments reportedly did not see the economic benefit from a subsidy". However, he was uncertain as to whether the events actually produce positive financial impact: "There are often economic impact studies commissioned by the promoter and submitted to the local governments that could provide such information [tourism monies spent]. What can be said is that some premises of such economic studies can be attacked successfully. That said, the race usually takes place anyhow. For example, the Circuit of the Americas created a prospective economic impact study that projected sufficient sales tax revenue to meet the milestone of government support". These studies, like most event studies, are based on the number of people visiting a city and how much money they spend on hotels, restaurants, and

merchandise. Each element is impacted by the visitor and recognized by the government for its private business income and tax revenue potential.

008 (USA, television) 'liked' the potential outlook but was cautious, "That's a case by case basis. Really the potential is there to get a lot back for a little money spent. Austin is doing a great job in researching this. Some in control say it's worth it. There's this fund in Texas set up by the state legislature there that sets seed money for major events like the Super Bowl. Austin got \$25 million for its race last year. Maybe some of that is from the city as well. I don't know what they are paying for the race, maybe \$35 million or \$50 million. This certainly helps". He remained keen on F1 compared to other motorsport events. "I've actually done my own individual canvassing around Indianapolis during its three big events. Formula One is the most lucrative by far for the local merchants. The breakdown is easy to see. Indy-car and NASCAR fans are modest and are on a budget. Most come from the general regional area. The Formula One fans are different. They come from a vast geographical area. F1 fans like nice hotels. They eat at nice restaurants. So yes, I would say Formula One makes a difference". His answer underlines the sophistication of the F1 fan and their ability to travel to events compared to some other sports.

In recent history, Canada has set the standard for races in North America. 008 also offered comparison to the US. "Canada is interesting. The promoters there asked for \$1 million to keep its NASCAR race and were turned down. That's a relatively small number. So they will lose that race. But the governments in Montreal and in province de Quebec did come up with some money to bring back the Canadian Grand Prix after they lost it a few years ago. I am sure it is a lot more". He continued, "Canada is not a joy ride either. If they were allowed to lose money, the government would not intervene. In Canada the power will pay what it takes. This is not true elsewhere in the world". Montreal has sustained itself as long-term viable, unlike Indianapolis which is only 750 miles away: "This was not done in Indianapolis. Whatever the Indianapolis Motor Speedway was paying it was too much for the promoter and too much for local government to even consider". Mexico City is 2,300 miles south/southwest of Montreal but playing with different parameters on the money metre, "Where a guy like Carlos Slim, the

richest man in the world, is involved anything can happen". 008 reiterated that monies eventually come to fruition from governments because of 'a desire to show off' to other nations that they can do it better.

The Mexican attitude towards the WFOC is contrary to most American thought. "The Grand Prix of Mexico served as a showcase for the promotion of Mexico all around the world," declared 020 (MEX, FIA executive) who is its highest motorsport official. "It attracted a growing amount of foreign tourism to Mexico City and to the different sites of interest of the country. Mexican tourists were also visiting Mexico City. This high economic level tourism had a direct impact on the supply service providers and tourism sector of the country. The government received acknowledgement as a part of the organization and for their support at all the activities around the Grand Prix activities such as cultural exhibitions, concerts, commemorating postal stamps and coins banners, and many others". The concept suggests a strong touristic value to its reasoning behind a Grand Prix.

014 (MEX, OMDAI executive), who reports to 020, preached that nationalism is part of tourism: "I think that the government plays a significant role in making something like this happen. Events like the WFOC are an ideal platform for any government due to the global exposure of a whole country to the world. Mexicans are very proud people and the government is in a big hurry to tell the world about Mexico's achievements by bringing F1 to the front".

In Mexico, there is significant government involvement but it is difficult to learn exactly how governments are involved. 014 commented, "Nobody knows for sure and exactly how but the federals are involved to do whatever it may take". Motorsports in general and F1 in particular are part of Mexican culture, and this extends to local government, too. "We know there is involvement. I could not confirm what you are asking". This kind of rationale is consistent in some places; particularly outside Canada and the US. "Tourism and economic benefits plus world exposure (are the objectives)," affirmed 014. Mexico is an atypical model because its participation is globally expansive by placing tourism messages on F1 race cars at all events (outside Mexico), "This is the Federal Tourism Secretariat logo for the country and is just Mexico, and for other logos, for example Mexico City, there it is used to visit it at the beginning of the sentence. It is a general target

to visit Mexico but the main tourism target is Americans rather than Canadians,” concluded 014’s message on tourism.

Race car drivers, like businessmen, are often very much in the know about the business side of the sport. One of Mexico’s premier all-time drivers, 010 (MEX, Indy-car driver and F1 manager), said prior to the proposed 2015 Mexican Grand Prix, “The government will definitely help financially. This will happen mostly through their tourism offices but in other ways too. There will be tons of local support. The Mexico City government will assist wherever the race is held. The Governor of the State of Cancun will pledge his help as well. There is so much interest to promote tourism to Mexico that a GP will create a good message”. His message is consistent with the tourism connection: “The image is to promote Mexican tourism. This is a very important industry for Mexico and a GP would be a strong messenger”. He confirmed the alliance between government and tourism: “Just big injections of government money or encouragement to get companies to spend money to make it go”. As suggested by 008 (USA, television), 010 confirmed that the Mexican industrialist Carlos Slim was behind Mexico’s re-entry into the WFOC, “This is now a project of Carlos Slim. If Carlos can continue to energize support than there is no doubt a Mexican GP will happen. This is huge for him. And it is for everyone on down too. Carlos and his group with all their contacts with F1 can make this all happen. And everyone in Mexico tied to him will be happy to help to bring a GP to Mexico”.

The Canadian event in Montreal is unmatched in many respects to other events on the continent. Montreal is a popular destination for Europeans and North Americans. 006 (CAN, F1 promoter), declared tourism to be an important component of its race, “Here in Montreal yes,” referring to the importance of tourism. “Probably not much overseas,” he concluded. This interviewee also had high convictions about tourism for North America races in general based on that experience, “Canada for sure. We attract a good number of Americans and Canadians from outside the province of Quebec”.

European-based opinion on tourism, already established as being the beneficiary of government assistance, was as expected. 026 (BEL, corporate executive) acknowledged such help, “This is the case in Belgium. It was a big political issue but the regional government paid Bernie Ecclestone the

money he demanded to keep the race at Spa”. This was mainly to allow tourism monies to continue to flow into the region. He commented on why it may be acceptable: “It’s already done in Canada and Texas. It was done in Indianapolis. I believe government monies will be available in New Jersey. I am sure it would be for Mexico too. So yes it is already acceptable. It is probably necessary everywhere except the oil countries”. The US-based English writer 004 (UK, journalist) offered his perspective on the North American rounds: “There is no point for the US government to spend money on a F1 race here. A massive cash equivalent has no benefit to the government. It’s done in other places but it is a different mind-set. It’s done in some countries to put them on the map. Places like India or the Middle East. It also has a bigger economic effect in those places than it would in the American market. It does make sense for local governments to be involved. State or province governments would be fine like Quebec is in support of the Canadian Grand Prix. It works fine in that kind of circumstance. City governments and county governments can benefit with some kind of involvement because it greatly impacts the local economy”. However, 004 conceded its value, “For local economies it brings in lots of money. For sure a Formula One race helps hotels and restaurants. Anything in the service industry gets a boost with a race”. And he admitted its value as a tourist attraction that would coincide with most European thought: “Well, you need to fly somewhere to get somewhere, so yes, because if you go to any of these races you can visit the tourist sites wherever it may be. You enter through New York or Miami for example. These races are not there, but for foreigners going to a race it makes sense to make it a vacation or a business trip. So any gateway can be an attraction”. It may be concluded that while tourism monies are essentially important to Canada and Mexico, it is not established whether tourism is equally significant in the US, meriting substantial government subsidiary monies for tourism.

4.6 Administrating the WFOC

The administration of sport is an elaborate labour: as Parkhouse (1991) explains, its theoretical foundations are “accounting and budgeting, economics, sports law, communications, management, and marketing”. Through time and

progress, the WFOC now contemplates more disciplines including government and media (Parkhouse 1991: 428).

Bridges and Roquemore (1996) would agree with Parkhouse on these theoretical points but add that a training system is essential to assist the sport to prepare for future growth and sustainability. In fact, the WFOC is involved with feeder series to allow future drivers and teams to be educated into the rigours of Formula One (Bridges and Roquemore 1996: 420).

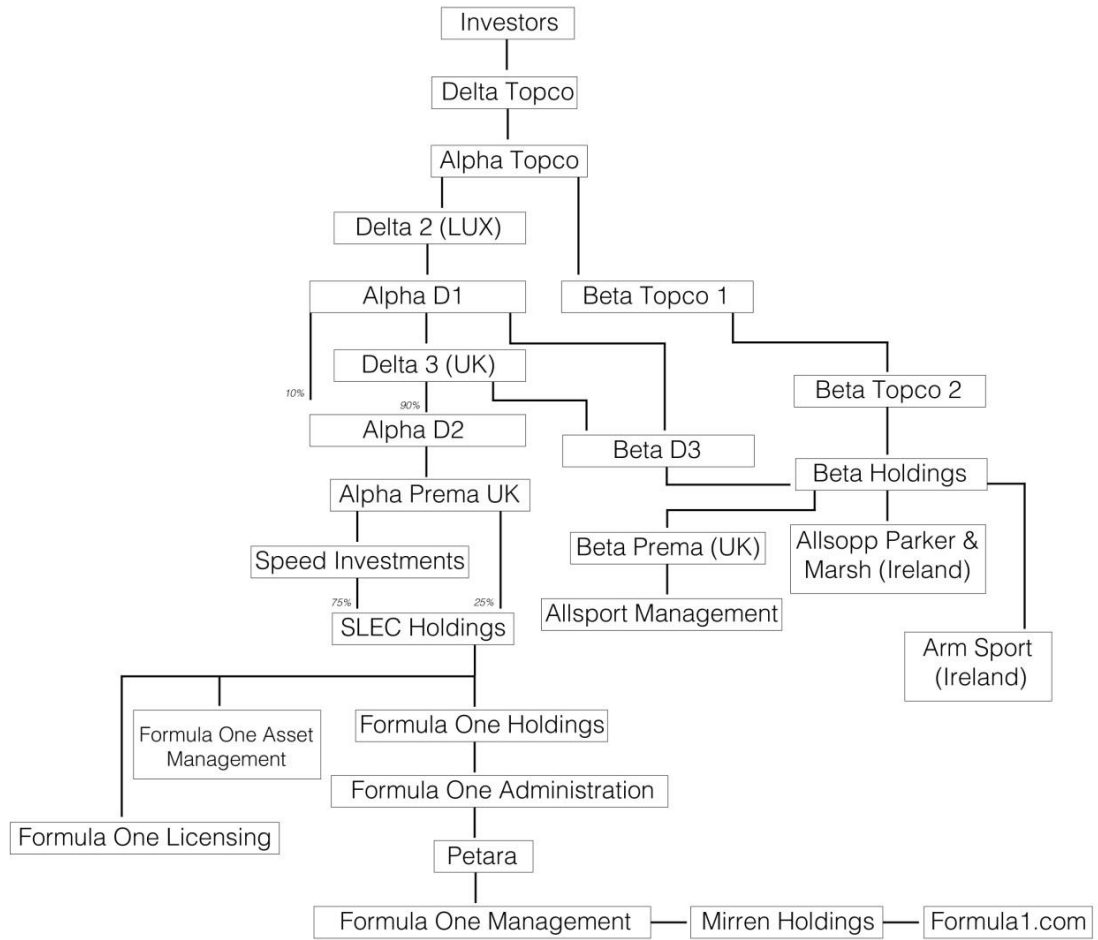
The WFOC, as we established, is owned and controlled by a highly complicated structure, the Formula One Group. We have already determined that it is a secret and complicated business model that is a global monopoly and oligopoly. The FOG administers every aspect of WFOC through divisions and holding companies located in several European nations. These aspects include administration, broadcasting, hospitality, product licensing, marketing, management, and television. This is a definition that underlines its development since the Parkhouse definition.

This structure has changed over the decades, but the fundamental theme of the structure has remained intact enough to ascribe it to the WFOC administration. The majority of day-to-day operational departments, other than Allsport Management, of the WFOC are found under Formula One Administration at the bottom of Chart 6.

According to Reid and Sylt (2007), their chart below identifies 24 what we will call moving parts (mainly holding companies, investment companies, and management companies) that make up the oligopoly we talked about in Section 4.4.2 that represents the investors in the FOG company structure.

Chart 6: WFOC: Business Structure

The Formula One Group Company Structure



2007, Formula Money, Sylt & Reid, p. 13

Source: Sylt and Reid (2007: 13)

Investors, as part of the oligopoly mentioned in Section 4.4.2, would include major global concerns such as JP Morgan, Lehman Brothers, CVC Funds, Ecclestone himself, and his Bambino Holdings.

The rules and regulations of the WFOC fall under the accordance of the FIA. The FIA also certifies the level of a driver's ability to compete, and grants accreditation. Although an autonomous entity, the FIA operates in a close arrangement with the WFOC to assure race quality. There have been instances of disagreements between the FIA and the FOG; however, amicable solutions have proved typical in the interest of the WFOC as a whole.

026 (BEL, corporate executive) and others attest that the ultimate administrator of the WFOC is Ecclestone, "That's relatively simple to answer. Bernie Ecclestone controls Grand Prix/Formula One. He performs for CVC and himself but only he and those he directs is in control" (026).

Another Sylt and Reid chart (see Chart 7) shows the efficiency of the CVC Group, the present majority owner of the FOG, and how it manages its funds for its owners/investors as a globalized monopoly as we discussed in Section 4.4.1 and a framework for how the entity is administered.

Again, its structure as a private, for-profit entity differs it greatly from the Olympics and World Cup because of its immense money making abilities and the way it allocates its profits.

Chart 7: WFOC: Profitability**Financial Performance of F1's Majority Owner**

Parent company performance:

WFOC CVC's Ownership Performance (€URO)	2006
Fund management fees	96,051
Other third party fee income	58,663
Other income	5,723
Total operating expenses	118,847
Operating profit/loss	41,590
Profit/loss before tax	56,791
Net profit/loss	37,141
Employees	102
Wages and salaries	24,416
Average salary	239
Net book value tangible fixed assets	1,800
Total assets	180,965
Total current liabilities	15,438

Source: Sylt & Reid (2007: 15)

4.6.1 Is the WFOC a Sport or a Business?

“Formula One is the archetypal glamorous sport. A heady mix of brilliant and brave drivers, electrifying speeds, billionaire backers, debonair celebrities, and pioneering design and technology” (Financial Times 2008).

The obvious argument is whether the WFOC is a sport, business, both, or other? This was first discussed in Section 2.4.2 and illustrated in Chart 2. There is no ‘happy medium’ in this assessment, as opinions are overwhelmingly biased. It is apparent that specific opinions vary but ultimately there is a general agreement there is an acceptance of a combination of determining categories contingent upon whom may be considering it as such.

011 (USA, FIA executive) thinks it is both a sport and a business. “I see it two ways. It is certainly a sport to those who buy tickets. Formula One is a happening. Let’s say you go to a race. You’ll come back and that’s terrific. It’s a business because as the saying goes, a driver would drive for free but once he gets paid to do it then it becomes a business. As you get deeper into it then it becomes strictly a business for some. But it’s a sport too, and you can’t get away from it”. He believes Ecclestone sees it in the same light: “It’s a sport for Bernie too because he loves it so much. Bernie is very intense but it’s not about the money anymore. Now it’s a grading system. He wants to negotiate the best price he can get to show he can get it”. Thus the argument of it being a business prevails.

His replacement at ACCUS and as a FIA official, 024 (USA, FIA executive) agreed: “Formula One is both a business and a sport. It can be either or both on any day”.

The Sports Car Club of America (SCCA) Vice President 002 (USA, SCCA executive) said it is a business from the top down. “For Ecclestone it’s all about money, so for him it’s 100% business. It essentially trickles down from the top where it starts as a business to the bottom where it is a sport for the fan”.

This research found, in general, journalists and business consultants more readily available to offer comment or comparison on the situation. 003 (USA, journalist) thinks the WFOC today is both a business and a sport, “While my initial response would be that Formula One is a business, in fact there are elements that require Formula One to be considered foremost as a sporting activity. In today’s

world a sport can be defined as an activity wherein the participants compete with no expectation of commercial and or personal gain. Some participants pay to play. They are amateurs. The others are paid to play. They are professionals. There are some variants of the definition of amateur and professional. Some amateurs accept commercial sponsorships to offset their costs. In turn some participants who are categorized as professionals treat the endeavour as a sporting activity. For example, would Larry Ellison, a billionaire, still compete in America's Cup without the millions received in sponsorship? In that circumstance at this time the answer is yes. In Formula One, drivers in the back half of the grid pay the teams in order to compete. At the front of the grid the drivers are paid millions per year by the teams. Amongst teams new owners come into the sport not for profit but in the belief in time their team can compete for the championship. Their initial motivation is sporting but tempered by commercial realities. During the race itself there is no question that all participants believe that they are competing in sport. During that two-hour period it is all about competition, no matter if the team or driver is competing for first or last. In turn fans of Formula One during those two hours watch what they believe to be a sporting competition. Those two hours of competition are preceded in the local market for several weeks by unconcealed commercialism. If not for the commercial support Formula One would be another backwater sporting enterprise. For the most part the employees within the teams themselves work to compete."

008 (USA, television) announced F1 races for an extended period on a national cable network in the United States and believes F1 is 100% a business: "Clearly it's a business. You can't have one without the other, though. That being said the business model is very unique. It's designed to get as much as you can from the consumer. But this formula particularly does not work in the United States. It does not deal with the fact that the United States is a very competitive market and F1 offers it no balance. You can see that in what has happened in Detroit, Phoenix, and Indianapolis".

Canada's highest-ranking motorsport officer 001 (CAN, FIA executive) is also a FIA official and agreed with his counterpart, 011 (USA, FIA executive), "I would most definitely say it's a business first. This is rather obvious based on its business schedule".

The individuals or entities who act as the WFOC proxy at its various geographical locations can probably offer the best perspective on how it operates and performs. 006 (CAN, F1 promoter), said, “It functions as a business. Everything about that organization runs like a Swiss watch and we treat every aspect with them as a business but our clientele are race fans. The habitants in Montreal, and Quebec, are more specifically Formula One fans. Our negotiations are always with Bernie Ecclestone with no exceptions as he is the governor for Formula One Grand Prix complete”.

020 (MEX, FIA official) is Mexico’s highest-ranking motorsport official at OMDAI and a powerful member of the FIA’s World Motorsport Counsel. He gleefully explained, “For the Mexican people it is a sport. For everybody else, the teams, the sponsors, for Mr. Ecclestone it is a business. The Mexican people are full of passion for the sport so they see it no other way”.

European perspectives can often differ, yet businessmen seem to find a common ground in this area. 026 (BEL, corporate executive), a mid-level Belgian advertising executive, stated, “All racing is a sport but Grand Prix/Formula One is a gigantic business. There is a difference because only Formula One can encompass world marketing”. 019 (UK, corporate executive) agreed, “The whole reason it exists is because it is a business. For Sunday for two hours it’s a sport but it is business at all other times”.

In some concordance, a British motorsport journalist, 004 (UK, journalist), added, “It was once a sport but now it’s a business. It was a sport twenty years ago. Now it’s about technology and advertising. It’s no longer confined to the European continent and a few other select places. It’s about the global economy”. 004 was pressed on about what constitutes these functioning standpoints and continued, “It is totally a business. It’s not just organizing the race itself. It’s the television, technology, billboards, licensing, everything advertising. Formula One is a huge global business”.

Engineers will typically differ from most other schools of thought and this research identified their different ideas. A former Formula One race engineer from the UK, 017 (UK, F1 team engineer), said, “It’s a business not a sport. It has not been a sport in a long time”. Another former Formula One race engineer, 015 (UK, F1 team engineer), offered a more complicated viewpoint: “A good question to start

with. It is both and I guess it should be given a value as a form of percentage of how much of each that it is assessed by this interviewee. My suggestion it is 60% sport and 40% business. The way I justify this answer is by quantifying the value of the driver in the equation. From the basic point of view the driver has to guide the vehicle around the course and arrive at the finish line as fast as he can, hopefully beating out his competitors. It must be remembered one is a teammate in near identical machinery so in the purest sense yes, it is function of human endeavour. However it has a very strong business component as so many lives incomes and careers and reputations are developed in the thing we call Formula 1”.

However 009 (SIN, government official), a public affairs officer for the national government from Singapore, mentioned a totally different outlook, “For Singapore it is an attraction. It’s an attraction that leads to business for the government”.

Seamus O’Brien, Founder and Chairman of the World Sport Group concurred with 004 (UK, journalist), 008 (USA, television) and 019 (UK, corporate executive): “Sport is a business driven by the same business rationale as any other corporate activity...” Today’s World Sport is a business and the WFOC is at the forefront of the business sport model (Minder 2012).

Earlier in this thesis, Chart 2, the qualitative poll demonstrated a mixture of sport, business or both. Twenty industry samples (taken from list of interviewees) and twenty fan samples (taken from outside the questionnaire group) showed a choice. Those from various professional sectors of the WFOC consider it overwhelmingly either both a business only or a sport and business, while almost a third of all race fans consider it a sport and business. Overall, the poll suggests 65% of the total sample think that this sport is also a business or strictly a business.

4.6.2 The WFOC Administration’s Inter-Connectedness and Relationships with North America

There is general consensus in the WFOC that North America often means the US exclusively and not necessarily Canada or Mexico. This would specifically be more applicable to applied technologies. However, it is assumed by many that drivers, events and sponsors have a greater degree of importance to Canada and

Mexico than to the US. These circumstances lead to this two-part question of interconnectedness and relationship influence: does North America have a greater impact on the WFOC than its need for the WFOC?

American opinions, for the most part, are consistent and believe the US does not need Formula One and it is Formula One that is more reliant on American technology. 011 (USA, FIA executive) said bluntly, "As an American, Formula One needs the US. The US has the world's largest disposable income of any nation".

002 (USA, SCCA executive) supported the belief that F1 is not needed in the US: "Mexico has done without it for about twenty years already [until 2015 when it was reinstated]. Canada has its hockey if it doesn't work out. It's more of a want than a need. Only F1 fans will care about it along with whatever local merchants. That's the fact of it all really". He added, "Ecclestone doesn't need a race here. The series needs it to be a real world championship. The advertisers need it most. They want to be here to sell. That's their real motive to be in F1".

003 (USA, journalist) responded differently: "Formula One would like North America to have a far greater contribution for two reasons. First, greater North American presence would increase overall audience which in turn would secondly increase the amount of sponsorship and television rights fees that could be earned by both the teams and the championship. The fact remains however for a country of 350 million in the US there is only a demonstrated current interest of 1-2 million people in Formula One. Except for a select few, North America is unconcerned as to whether it has a contribution upon Formula One".

008 (USA, television) said something this research ultimately seeks to prove: "North America [has a greater impact] on Formula One. It's a huge well-kept secret. There is a huge chunk of people involved in F1 that insist on racing in North America or really the United States. Despite the rise of China and India, the United States is still the largest or most important market. Norbert Haug, who [did] runs things over at Mercedes-Benz said we don't want one race in the United States but we want two or three races. You see it's a gaping hole. It's the best platform to reach its customers. It has phenomenal reach for the people who buy those cars. It's their number one market for share. With rumours for a race in Mexico this makes a statement for North America as a whole along with Montreal, Austin and very soon New Jersey". 003 (USA, journalist) offered an excuse for any disconnect

and possibly a warning, “The popularity of motorsports overall has been declining in the US over the past decade. The decline accelerated over the past three years during the economic global crisis”.

Politically, within racing circles, Canadian opinion often concurs with American opinion on this subject. 001 (CAN, FIA executive) responded, “North America has a greater impact on Formula One for two reasons. First, Formula One wants to be in North America because of its large market. North America does not necessarily need to be part of Formula One. And, Formula One relies heavily on sponsorship monies from North American-based firms. This would include some specific technologies over to the teams”. 006 (CAN, F1 promoter), agreed. “I would have to say North America on F1. We are in a position in Canada to measure that. F1 needed to be in America in my opinion and it largely explains why the Canadian Grand Prix was able to return on the schedule in 2010. It explains the constant search for the proper solution for a race on the US territory from Phoenix to Indianapolis to Austin”.

020 (MEX, FIA executive), offered, “We want Formula One in Mexico but Formula One needs North America. This is especially true for the United States and Canada. North America should have three races minimum. One race for each big country”. This implies that reaching the colossal market sizes in the three large North American nations is paramount for the WFOC administration.

European impressions are mostly consistent with 004 (UK, journalist) concerning the significance of the North American marketplace: “North America has a much greater impact on Formula One than Formula One on North America. North America allows Formula One into the world’s largest marketplace. Maybe that has changed somewhat with China but North America and particularly the United States is of far more importance as a desirable market to be in”.

The three national officials from Canada, Mexico, and the US all sat on the FIA World Sport Council and the research inquired how the Council works as an inter-connectedness tool. 011 (USA, FIA executive) responded, “It is very political. There are lots of people involved in the organization on the business side. I was the exception because I actually drove race cars and was a chief steward and all. This all struck me very strange because lots of guys never actually raced a car”. 020 (MEX, FIA executive) representing

Mexico, has influence with the authorities in Central America and South America as an active FIA board member and said, “We work individually (as a nation), often as a region (both as a representative of Spanish-speaking countries and North America), and always as a whole”.

Inclusion is key to sound relationships and 011 (USA, FIA executive) did not believe North America is slighted in the European-dominated atmosphere, saying “Yes, I’d say so,” when asked if there was proper North American representation on committees. “I think they make a big effort to make sure that happens”.

He also indicated his respect for his neighbouring countries, “Canada does it real well,” referring to its WFOC event. “Canada is good for Formula One and Canada enjoys Formula One because of all the imports it takes in from it”. “Mexico is maybe the same as Canada. It could be good there too because Formula One has much to offer Mexico in ways of excitement”. As for his homeland, “I feel the United States can support anything we want to do and we have. Like the space industry getting us to the Moon and that sort of thing. I understand at times we need to cut back on things but we can do it”.

002 (USA, SCCA executive) believed some of these relationships are already settled and working: “In some ways it [F1 in North America] is already successful. The United States has overwhelmingly established itself well enough as a technological partner. The Canadian Grand Prix is successful. It would be even more successful in Mexico if they go there again. So it really has not failed. It needs to find the right place to be successful. If all the right things are in place it will work, otherwise it will be just a blink on the radar”.

The Formula One Group is reliant on the individual automobile sporting alliances in each country to act as its representative in each place it visits. These alliances, an important connection for the WFOC, are made up of multiple clubs in their respective nations. The alliances, called Automotive Sporting Nationals (ASN), are FIA members. These clubs often are responsible for some of the essential officiating for a WFOC event, e.g. track workers, who are needed in great numbers.

In the US, the Sports Car Club of America is a member of the Automobile Competition Committee of the United States (ACCUS). ACCUS is the ASN for the United States, and has played a huge role in every US Grand Prix in cooperation with the WFOC administration. The research asked 002 (USA, SCCA executive) if this is viewed as business or sport. He responded that it is business. "The SCCA is paid a good sum of money to perform certain services that the F1 people need to put on their show". In fact, the WFOC races in Canada and Mexico rely heavily on the SCCA to supply corner workers, pit marshals, medical personnel, and other qualified personnel not necessarily available in some places which are imperative to race operations.

For the US races, 002 said the SCCA provides various functions: "From an administration standpoint, the F1 people need each national sporting authority to sanction the race. So we would do that here. We would also put together the support races for the F1 race itself. Years ago we would take care of things like timing and scoring. The one thing they rely heavily on us would be using our pit marshals and corner workers. They do not have enough people to do that so they must rely on locally qualified people. The SCCA also would supply its support people for the races in Canada and Mexico. The SCCA is the only group in North America that can do this, so Ecclestone needed us". The support system was also enacted in Mexico during its races.

There are conflicts in these inter-connections, as 002 concluded, "Well, we have our differences. We have two different ways of doing things. Much of the time there are disagreements on this or that. I think they actually resent us and our ways. They are very used to getting their way but we also like the way we do things too, so sometimes you just need to compromise. In the end they run the schedule and its own race and we do things like corner workers and the support races. It all works out in the end".

The inter-connectedness of the North American member nations is apparent. There is a higher expectation from and reliance on the US because of its greater resources. Any disagreement is seemingly minor and there is a broad understanding that their relative success is contingent on their ability to act as one continental effect on their relationship with the WFOC.

4.7 The Internal Politics of the WFOC

“Nothing in Formula One gets by Bernie [Ecclestone] first,” meaning he must approve every major decision, proclaimed 011 (USA, FIA executive). This person, a long-term and upper echelon FIA official, provided some of the most intimate information learned in this research and was generally accepted as accurate.

Commenting on who controls Formula One Management, Sylt (2013b) concludes, “Ecclestone now owns just 5.3 percent of FOM, but has managed to remain in the driver’s seat, staying at the centre of all the deals shaping the sport”.

Ecclestone controls the WFOC because it is his own contraption. “Yes,” 011 said, “but it is more like Bernie Ecclestone is Formula One. Without him there is no Formula One today as the whole world has come to know it and enjoy it”. In effect, Ecclestone is the ‘boss’ regardless of any official title. “He makes every major decision thus avoiding much of the internal politics of most corporations. “Of course he has a fantastic network of employees but he essentially makes every major decision and most minor ones too. Every contract is negotiated by him personally because he enjoys it,” concluded 011 on this matter.

The industrial culture of the WFOC is so globally accepted because it is a genuinely exciting sport and entertainment medium. It can be summed up by a defining statement made by its leader, Bernie Ecclestone. During a CNN interview with worldwide coverage, Ecclestone commented, “I suppose it’s a bit showbiz, bit glamour, bit of excitement, people like a little bit of danger. So I suppose all those bits wrapped into one are Formula One” (CNN 2007).

Again, it is clear that the internal politics are controlled by one person who defines his empire as a little bit of everything but with a great effect that makes his concept of control the internal politics as the basis of its success.

4.7.1 The Connected Politics of the FIA

The FIA is unique to the WFOC and a connected part to much of its internal politics discussed above. Accommodating leaders are sought through cooperation, as illustrated by the reliable 011 (USA, FIA executive), “When Max [Mosley] was elected it was because of the solidarity of the American clubs. We engineered all

the North American and South American clubs to get him elected. That's how [Jean Marie] Balestre [past president] was removed. He could not have won with just the European clubs. They were behind Balestre. But there are many other countries in Central America and each carried a vote and Max won. We lobbied for that. [Jose] Abed was instrumental in getting the Latin countries to support him". 011 said, in essence, this is what Ecclestone wanted, too.

011 offered insight on how the internal politics work inside the FIA but indicated how it works outside that box in a parliamentary fashion when connected to other space, "It's just like Republicans and Democrats. People seek your support on issues and even on the election of the president of the whole thing. I remember once Max [Mosley] came up to me about [Stirling] Moss. He was complaining about rules on equipment used for historic racing. He wanted to use the old equipment he used when he raced like his helmet and gloves. But equipment got better and I forgot how we resolved it. Max wanted him to use the most advanced safety stuff at that time".

The World Motorsport Council (WMC) decides many of the internal political arguments. It being a difficult atmosphere to understand from the outside, 011 provided an example of how debate is won: "When you are sitting there on the Council, you want to voice your opinion on everything but you don't want to lose your support when you really need it. We were at Le Mans one year and I wanted to put a chicane on the Mulsanne Straight. It was a safety issue. We really needed to slow down the cars because it was getting dangerous. I won that issue". This illustrates a typical internal politics situation affected by North American input.

4.8 The North American Case

There is a phenomenon in the US and Canada called 'major league syndrome' which typically refers to the four big sports in Canada and the US: baseball, basketball, football, and hockey. This does not apply to Mexico, where soccer is considered the only other major sport and perhaps baseball to a far lesser degree. In short, it is considered a road block to the market penetration of other sports in the US and Canada, including Formula One.

Whitson and MacIntosh (1998) may argue that since the 1990s the major league professional sports in North America have been great media events that penetrate the global markets more effectively than other international events

reaching the North American markets, “They are watched by global audiences, and as a result have become highly attractive marketing vehicles for promoters of a variety of global products, as well as offering promotional opportunities” (Whitson and MacIntosh 1996). Wenner (2000) points out the WFOC along with the America’s Cup, Tour de France, and Wimbledon are exceptions to that rule, but the research discovered that the WFOC’s North American case is even more elaborate in its mutual relationship (Wenner 2000: 57).

Assuming North America is important to the WFOC, we must examine the premise why it is, and 011 (USA, FIA executive) again explained “Both [Canada and the US] have a history with Formula One. Montreal has some of the most enthusiastic fans in the world because of its French, Italian, and Portuguese populations. The United States is still the largest marketplace in the world and large enough to support more than one race. The United States alone is probably bigger than all of Western Europe which holds many rounds of the championship. As for Mexico, it also has a history with Formula One and will probably be added to the schedule within a year or two. North America can hold four or five races and accomplish that in two swings. Canada and New Jersey in the summer and Texas and Mexico in the fall would make the most sense”.

Measuring its importance proves a difficult challenge, with various opinions. In the ‘big picture’, 011 conceded, “It is rather important but in the long run, if it never happens, it may not matter too much either”. 011 believed the size and sophistication of a given nation matters most to the WFOC: “The big difference is the size and kind of country holding it. Today a Formula One race provides an aura of being modern or a modern country. Most of the best technology comes from the USA, the United Kingdom and Italy. We can add Germany and Japan to that, too. This technology is the modern feeling I am talking about. At places like Bahrain they like that connection to being modern because it’s not modern in the make-up of Formula One. Monaco does it real well but they do it more for tourism [touched on in Section 4.5.1]. Monaco probably does it best”.

002 (USA, SCCA executive) talked about the ‘major league syndrome’ mentioned earlier in this chapter as a real problem facing the WFOC in Canada and the US. “F1 is not too important for most sport fans here. It is to those who love F1, but most rather follow their baseball or football team from their hometown”.

Here, 002 is referring to the 'major league syndrome' (the four major sports: baseball, basketball, football, and hockey).

The organization of a WFOC event is risky business for promoters, as 002 explained: "It's a good business for Ecclestone. It's not nearly as good for promoters. It's good for the FIA. It's good for the cottage racing industry. It's good for advertisers".

002 described US results as varied. "It has not been so good to the promoters who have tried F1 here. It has been a losing proposition. We all remember an ostrich race outdrew the race in Phoenix. But F1 did draw fans here at Long Beach. Long Beach, Detroit and Indianapolis (drew well). Indianapolis drew the largest crowds of any race on the schedule when it ran here just a few years ago. So it can work in the right place".

While locations like Phoenix failed miserably, Indianapolis did draw a diverse audience, "Despite the United States Grand Prix attracting the largest crowd of the WFOC season, the Indianapolis Motor Speedway is such a large stadium that even a crowd of 150,000 can look small there, creating an illusion that they event was not well attended," 002 added.

011 (USA, FIA executive) credited one reason the WFOC and F1 are attracted to North America as the high standard of event organization: "Our people. We don't need a driver to be there but we have workers that make every race happen, and we have executives making decisions to spend money there, and we have loads of people on the technical side that makes F1 what it is today".

Overall, Europeans strongly support the inclusion of North American WFOC events and participation to qualify it as a genuine world championship. 026 (BEL, corporate executive) articulated, "North American races, especially the United States, must be on the schedule to be a true world championship. Formula One needs American technology. Formula One needs American money. So Formula One needs the United States really". He said the media has strongly suggested the same throughout the past forty years.

"Formula One needs to go to as many large countries as possible regardless which continent they may be on, without losing its European base and heritage," stated 011 (USA, FIA executive). "You can't go to every country that wants a

Formula One race, so Bernie [Ecclestone] must be selective, but Canada and the United States are both important to the world championship for different reasons and some of the same reasons". 011 agreed Mexico could be now added into the equation.

011 and 002 (USA, SCCA executive,) worked closely together for several decades, so it is not surprising that 002 agreed, "I don't think so. I'd say no. Maybe it can be of some use on the local government side. These events are expensive and government has no interest or responsibility to be involved. I doubt there would ever be any overwhelming public support for bringing a F1 race to a city here. It's only of interest to those who can make money from it. I'd say the same applies to Canada and even Mexico where there is plenty of corruption with these types of things".

Both men have worked with their Canadian counterpart 001 (CAN, FIA executive), who sharply disagreed because, in his opinion, governmental monies are a necessity: "Mainly because the race brings in so much money to the local economy". He added that local and regional governments have a history of becoming involved in North America rounds. However, 011 (USA, FIA executive), while not denying the history of government involvement, continued his disaccord with this approach as well, "No (government monies should not be allocated), but even more so because on this level not everybody wants it. Local governments usually have open arms to F1. Remember investors create the product and they should be compensated for their risk at these upper levels". This may be explained by noting Canada, being more socialist, by definition is more reliant on government than the US, which is more capitalist.

However most critics like 011 (USA, FIA executive) find harmony in developing bridges and roads to create access to events that will have a long-term effect on any community long after F1 may leave an area. "Developing infrastructure seems to be a more acceptable method for government involvement because it could be utilized for other things. The race in Texas got all kinds of provisions for bridges and roads leading to the circuit which were probably needed anyway".

The North American case is unique because there are three diverse nations with varying degrees of commercial support, government grants,

cultural interest, and applied technology. Its necessity and the prowess it offers to the WFOC are undeniable. This research learned from the experts interviewed there would be little disagreement globally if the continent hosted more than its present three races (with an East coast and West coast US race) added, emphasizing respect for its marketplaces.

4.9 Summary and Conclusions

It is evident in this empirical chapter that the political situation in the WFOC is highly complicated. Multiple political bodies are part of the overall framework, which makes questioning tricky. In this section we discovered the WFOC is both an oligopoly and a monopoly, it is complicated and somewhat secretive within its own framework and more so outside it as well, and North America plays a growing, significant, and essential role in several capacities.

It is presupposed, based on select relevant observations that there are indications of the following regarding the World Formula One Championship Administration:

1. The Formula One Group represents the ownership and controls the World Formula One Championship and its administration through an intricate oligopoly.
2. The three most indicative entities of the oligopoly from within, in order of significance, are Formula One Management (FOM), Formula One Administration (FOA), and Formula One Promotions (FOP). The oligopoly extends itself well outside this first superstructure to include participating teams, different administrating governments, trans-national corporations, and other types of under-structure.
3. The FOG's ownership of the WFOC manages a global monopoly of the highest echelon of international race drivers, race cars and assorted technologies.
4. As President and Chief Executive Officer of FOM and FOA, and through his part-ownership of Alpha Prema, the parent company that owns the Formula One Group of companies, Bernie Ecclestone, an individual, maintains an exclusive command of the WFOC, demonstrating a monopoly of the superstructure oligopoly.
5. The oligopolies and the administrative levels of the World Formula One Championship conduct a sporting activity but act as a for-profit business.

6. The cost to stage a WFOC varies by nation; however the fee paid to the FOM by promoters in North America is understood as ranging from \$30 to \$50 million (which is more than the average amount of all events), not inclusive of a circuit to hold the event.
7. North America is of significant business importance to the WFOC based on its market access, transferred technology, and advertising money spent.
8. The WFOC is of marginal importance to North America and limited to a sporting event only (as inclusive of a world championship).

The actual need for the WFOC to be in North America is money and technology-based. 002 (USA, SCCA executive) commented accordingly: “Ecclestone doesn’t need a race here. He has plenty of money already. The series needs it to be a real world championship. The advertisers need it most. They want to be here to sell. That’s their real motive to be in F1”.

From a European perspective, 026 (BEL, corporate executive), showed solidarity, “North American races, especially the United States, must be on the schedule to be a true world championship. Formula One needs American technology. Formula One needs American money. So Formula One needs the United States, really”.

The research found it interesting that several prominent motorsport officials indicated the WFOC is really not significant in North America: we recall 002 (USA, SCCA executive) who said, “Not really [important]. Mexico has done without it for about twenty years already. Canada has its hockey if it doesn’t work out. It’s more of a want than a need. Only F1 fans will care about it along with whatever local merchants. That’s the fact of it all really”.

003 (USA, journalist) summed up points 7 and 8, “Neither [plays the greater role]. Formula One would like North America to have a far greater contribution for two reasons. First, greater North American presence would increase overall audience which in turn would secondly increase the amount of sponsorship and television rights fees that could be earned by both the teams and the championship. The fact remains however for a country of 350 million in the US there is only a demonstrated current interest of 1-2 million people in Formula One. Except for a select few, North America is unconcerned as to whether it has a contribution upon Formula One”.

Political structures are abundant in the WFOC oligopoly. The WFOC administration itself is a business plan based on its political structure. The WFOC superstructure has a sententious inter-connectedness with the substructure FIA, which also acts as a political structure. These units essentially operate in tandem to coordinate with the astute relationships with the trans-national corporations and governments that desire a business association with the WFOC.

1. The national governments in North America participating in the WFOC are the most meaningful connections outside the superstructure: The FOG administration's relationship with political structures in North America is divergent to that in other places:
 - a. there is no federal involvement in Canada or the US in the capacity of event promotion or driver advancement, although federal involvement may exist in Mexico in indirect form in both roles
 - b. political involvement is typically state, county, city, or a combination of two or three localized governmental bodies
 - c. political involvement may be by: 1) direct funding, 2) tax reductions and considerations, and 3) building of necessary infrastructure
 - d. regional governmental departments will typically begin to administrate from the highest executive and trickle responsibilities to:
 - 1) special offices organized for special events, some exclusively for motorsports, 2) offices of commerce and 3) the tourism bureau
2. Government allocation of monies is necessitated by most WFOC race promoters in North America to become a profitable event; however: 1) public support is typically low and considered as an unethical approach to subsidize a capitalistic venture, and 2) governments justify expenditures by offsetting the large income received from new business from visitors and tax revenue associated with a WFOC event.
3. The policy of political structures towards the WFOC stays in place until a) public outcry against the WFOC for public funds spent, or b) the existing political structure is replaced by another political structure not 'friendly' towards the WFOC.

It is easily concluded that 1) the WFOC, as its own autonomous entity, is filled with its own internal politics at numerous levels from its relationships with the FIA to its own teams, and 2) it is complicated with 'real' governments often at both local and federal levels, which can best be described, as Jones (2006) says, as 'indefinable' because of its complicated nature in its globalized apparatus. It is

apparent that no globalized model can avoid politics and government, and the WFOC is not an exception to this rule.

Chapter 5: The Globalized Industrial Complex that Underpins the WFOC

This chapter first considers the natural relationship between the WFOC and the automotive industry and later the WFOC's extended commercialized alliances. Although commercialism is a broad term, this chapter deciphers the precise connections in advertising, hospitality, marketing, media, public relations, sales, technology, television and other types of business and communication.

5.1 The WFOC and (Global) Automobile History

The WFOC always had a linkage to the automobile industry. The terminology is tricky in this regard, because teams are commonly referred to as constructors. This designation is reserved for the fabrication of the chassis and not the motor. It was, and still is, common or possible for a small, independent team to purchase motors from a specialized motor company and be classified as a constructor. In some instances, a large automobile manufacturer can supply motors to teams and not be a constructor. There was also a period of time when a manufacturer would simply badge its name onto a motor produced by a specialized motor company for commercial purposes. In more recent times, including the past two decades, some manufacturers have produced both chassis and motors, thus are considered constructors, which is actually a term used by the FIA for these purposes. This complicated, inter-connectedness was mentioned in Section 2.4.3.

Clark and Fujimoto (1991) explain that the automobile industry is a microcosm of the new international industrial competition, and automobile production is a complex project. Furthermore, they point out that global markets are fascinated by new products. It becomes evident, with its technological advancements and competition excitement, that the WFOC has become the perfect marriage partner to promote its products.

Prior to World War II, the car giants Alfa-Romeo, Ferrari, Maserati, and Mercedes-Benz all competed in F1. After the war, several other manufactures entered for brief periods, including Bugatti and Lancia. In its modern history, Ford, Jaguar, Porsche, Toyota, and Yamaha have all appeared and disappeared in the championship. High cost is often used as the excuse for teams to depart F1; however inability to be competitive is the more accepted reason. Today, only

Ferrari, Mercedes-Benz, and Renault operate their own internal teams with their own chassis and motor. However, Honda, as an engine supplier, has established a strong association with a first-tier constructor that allow them to contend for commercial value. Currently, in 2015, these four manufacturers supply motors for all twelve competing WFOC teams.

5.1.1 Commercial History

The world's first major sporting goods company was founded by American Albert Spalding in 1876, thus marking the beginning of sport consumerism according to Slack (2004).

In relative terms, entertainment and sports sponsorship has had a slow evolution. It is difficult to determine its rise to the forefront, but most experts would agree that it occurred sometime during the 1970s and 1980s, and grew with episodes of setbacks when the global economy slackened. It is often suggested that the first form of advertising that is cut back during financial slides is sponsorship.

The WFOC, the sport and the business, is contingent upon its commercialized relationships. "Commercial sponsorship has been defined as 'an investment, in cash or in kind, in an activity, person or event, in return for access to the exploitable potential associated with that activity, person, or event by the investor (sponsor)'" (Meenaghan 1991: 36).

The last decade has seen an explosion of corporate sponsorship spending across the globe. "Between 1999 and 2009, worldwide sponsorship spending nearly doubled, from \$23 to \$45 billion; by 2009, North American and European sponsorship spending approached \$17 and \$12.2 billion, respectively" (Groza, Cobbs and Schaefer 2012).

In its infancy, F1 was void of any commercial sponsorship. Most teams existed as privateers with personal ownership, ownership by manufacturers, or a combination. Some smaller teams received operational monies from wealthy individuals, who were referred to as patrons. This gradually changed when the larger teams began to attract commercial sponsorship in the late 1960s. During the next two decades, this movement towards commercial involvement had gradual

consequences on every team. Today, virtually every team in the WFOC has a multitude of commercial sponsors and an association with a manufacturer. Some teams (Ferrari, Mercedes, and Renault) actually own and operate their own teams and attract further commercial undertakings with their own vendors and other corporations seeking an attachment. This concept permits manufacturers to have greater control over their business destiny.

5.1.2 Contemporary Commercial and Technological Entanglements

Corporate or commercial involvement, including technological support, in the WFOC, or any global sports programme, is often referred to as sponsorship. Jenkins, Pasternak and West (2005) propose an interpretation that remains accurate: "In Formula 1 there are four main kinds of sponsorship:

- Suppliers who provide products and services in return for cash and receive no other direct benefits from their relationship with the Formula 1 team, such as specialist trailer manufacturer JS Fraser (Oxford) Ltd. who provide the semi-trailers used by Formula 1 to transport cars and equipment around Europe.
- Technical partnerships are focused on the direct provision of products and expertise for building the car in exchange for marketing services to the company, perhaps through brand exposure directly on the car or also through access to Formula 1 events. The relationship between Shell and Ferrari would fit into this category.
- Corporation partnership involves the supply of related products and services in exchange for marketing services and branding; examples of this kind would be the supply of trucks by German manufacturer MAN to Williams F1.
- Conventional sponsorship involves the supply of funding in exchange for promotion of the sponsor's brand within the team. Tobacco companies such as Marlboro are the classic example of this kind of partnership." (Jenkins, Pasternak and West 2005)

This research discovered and employs an alternative sectional definition that includes all the categories mentioned by Jenkins, Pasternak and West, however using a less elaborate but more comprehensible structure under the 'corporate umbrella': 1) Commercial, and 2) Technological.

5.1.3 Relating the Auto Industry and the WFOC as a GPN

003 (USA, journalist) provided this outline to support his new theory that the WFOC, connected by the auto industry, is indeed a GPN:

- (1) *Government sponsored Formula One events (and venues) were created to:*
 - (A) *Demonstrate the economic prowess of the country*
 - (B) *And also to use it as a promotional device for both tourism and business/economic development*
- (2) *Automotive manufacturers utilize Formula One to:*
 - (A) *Sell cars in different countries from a centralized decision made by a Board of Directors. Some of the marketing costs are paid by the individual countries where Formula One events are held.*
 - (B) *Enhance the self-esteem of the manufacturer's worldwide factory workers and administrative / sales personnel (when the Formula One team demonstrates success)*
- (3) *International sponsors utilize Formula One to:*
 - (A) *Sell their products from a centralized decision made by a Board of Directors.*
 - (B) *Enhance the self-esteem of the sponsor's worldwide factory workers, but also their suppliers*

He continued, "In turn, the Formula One teams are promotional and technological agents for automotive manufacturers and sponsors. In that sense, they could be considered to be part of the Formula One GPN".

Consideration in his theory was also given to the WFOC's links: 003 added, "Some might argue that suppliers to the Formula One teams create their own GPN. While suppliers for Formula One teams are worldwide, with the teams spending a collective billion+ dollars to engage in Formula One competition, the concentration of manufacture and suppliers are in middle England and Italy. Thus the question becomes, what percentage of collective spending is worldwide?"

003 gave another related illustration of his theory: "While Italy's Ferrari might utilize Toyota's wind tunnel in Germany, for example, the cost of the cross-country

utilization might be at most be \$5 million. Collectively, if all of the worldwide suppliers to Formula One amounted to \$50 million, does a 5% of gross costs constitute the need for a GPN?”

It may appear that 003 escaped from the GPN theories discussed in this research earlier, as he concluded, “From a geographical standpoint, there are different nexi for a Formula One GPN. While the common denominator is the locations of each race, the nexus for the decision for the locations of Formula One races is London. The nexi for the automotive manufacturers involved in Formula One are Stuttgart (Mercedes), Turin (Fiat/Ferrari), Boulogne-Billancourt (Renault), and Tokyo (Honda). In turn, the headquarters for global sponsors in Formula One represent different nexi”. However this is most likely because the WFOC is embroiled in a crowded area of overlapping GPNs, causing confusion but not breaking away from the intended concept.

5.2 WFOC and Global Corporations

Capitalism, engineered by global corporations, is the vigorous exercise of trans-national business or commerce. This exercise can easily be both confused with and fundamentally agree with the principles of capitalism or free enterprise because of its emphasis on earnings and returns. Profits are generated by sales that are influenced by an arsenal of marketing techniques. Commercialism is a symptom of corporations and the WFOC is a participating beneficiary of both concepts.

The study of commercial behaviour is relatively accepted, prevailing, and straightforward. “The essence of the commercial syndrome is voluntary agreement, honesty in dealings, openness to strangers, respect for contracts, innovation, enterprise, efficiency, promotion of comfort and convenience, acceptance of dissent, investment for productive purposes, industry, thrift and optimism” (Wolf 2004).

Commercialism is a well-proportioned archive of the social sciences. “Capitalism has structural power in that it sets a framework of social relations which individuals and groups find difficult to avoid, let alone challenge. The structure has become so entrenched that most of the people it touches take it as given that the attainment of ‘growth’ and ‘productivity’ are primary indicators of society’s success.

Indeed, capitalism has come to be unquestioningly accepted as a 'natural' part of the social order. The structure thereby has far-reaching and fundamental significance in shaping cultural, psychological, economic, political and ecological conditions in the affected (critics would say afflicted) historical contexts" (Scholte 1993).

Today, television is most often credited as the synergy and globalized conduit for reaching commercialized commodities and markets. "The globalization of the institutions of television is an aspect of the dynamic logic of capitalism, which stems from pursuit of profit as the primary goal. This requires the constant production of new commodities and new markets so that capitalism is inherently expansionist and dynamic. While there is money to be made from the production and sale of television programs these are also a means to sell the technological hardware of television, from satellites to sets, and to deliver audiences to advertisers so that television stands at the core of wider commercial activities and is central to the expansion of consumer capitalism. Thus, to understand the globalization of television, we need to grasp the changing character of its economic and organizational facets" (Barker 2002).

This kind of cooperation between two or more different entities to produce a single spectacular result is defined by Silk, Andrews and Cole (2005): "Synergy' is that process through which different parts of a conglomerate come together to create added value to a given initiative. Synergies are derived through cross promotion of commodities and achievable through corporate integration. Corporate integration enables "product lines" to promote each other through mutual association" (Silk, Andrews and Cole).

MacAloon (1985) adds, "Commercial sponsorships do not in and of themselves necessarily promote spectacle values, but the marketing of those sponsorships almost inevitably does. Marketers want big shows, simplified and consistent messages, and a passive audience content to be wowed". The WFOC is the big show that translates into a global commercial extravaganza (Tomlinson and Young 2006).

The WFOC is a well-established world sport, World Sport and Mega Sport. As was determined in Chapter 4, the WFOC is also a global business. In fact, the WFOC is a complex and highly profitable business with unsurpassed global reach

and frequency from its network of penetrating associated business tentacles. An effective and inclusive marketing platform is integral to any global business plan, and the design concocted and employed by the WFOC may be pre-eminent in its comprehensive conception.

All world sport, including the WFOC, subscribes to a composite commercialized plan to promote and support its anatomy. This research has detected a direct correlation with the following seven inter-connected promotional disciplines and the purpose of the commercialized WFOC:

- Advertising
- Corporate entertainment
- Media, including television
- Marketing
- Merchandising
- Sales
- Trade

The framework that creates and services these promotional opportunities can vary according to the needs of each respective company, team, or association, but a general explanation is offered by Jenkins, Pasternak, and West (2005): “Typically the structure of the commercial organization would be split between business development, which focuses on getting sponsors, and account management, which focuses on maintaining relations with existing sponsors and partners” (Jenkins, Pasternak and West 2005).

Gwinner (cited in Amis and Cornwell 2005) recognizes several reasons why enormous amounts of money are spent on commercialism: “One benefit of sponsorship is the ability of the corporation to use the event as a venue for client cultivation”. Furthermore, he says, “Another important objective for many companies is to use sport sponsorship as an opportunity to build consumer awareness for brand among key market segments (Turley & Shannon 2000; Walliser 2003)”. Lastly, he states that another goal of sponsorship, “Involves the brand leveraging the image of the event”. The transition of the event image to the brand image is called image transfer. Gwinner regards the team/event

identification, attitude towards commercialization, event/brand fit, and clutter process as the image transfer used in global sport sponsorship (Gwinner, cited in Amis and Cornwell 2005).

“It has been suggested that the proliferation of sponsorship in sporting events may lead to negative attitudes towards the events and their sponsors because some consumer segments feel sporting events have become too commercialized, thus detracting from the event itself,” Gwinner notes (cited in Amis and Cornwell 2005). While this may have been true of Formula One ‘purists’ during the early period of corporate commercialism, this research did not detect any negativity regarding modern Formula One and it was concluded to be an absolute necessity for the survival of the WFOC. Some more specific promotional programming with valued incentives may even be considered popular in the consumer marketplace. This can be a major concern for the WFOC, which has repeatedly been referred to as an entertainment business by Ecclestone, as noted by 033 (UK, WFOC driver).

It could be said and understood that virtually all World Sport and Mega Sport is for-profit based on each business model. “Today, virtually all aspects of the global sport institutions (governing bodies, leagues, teams, events, and individual athletes) are now un-self-consciously driven and defined by inter-related processes of: corporatization (the management and marketing of sporting entities according to profit motives); spectacularization (the primacy of producing of entertainment-driven [mediated] experiences); and commodification (the generation of multiple sport-related revenue streams). Moreover, since sport cultures around the world have become ever more subject to revision by this late capitalist strain of globalization, sports institutional infrastructure is beginning to reflect a high degree of global uniformity. Geographically disparate examples of the corporate sport modality (Andrews 1999, 2006; McKay and Miller 1991) now openly embrace a profit-driven managerial structure and marketing orientation. That contemporary sport (leagues, teams/ franchises, tournaments/events) should display high levels of organizational commonality can be attributed to the commercially-driven corporation becoming the primary organizing institution of late capitalistic society. The commercial corporation is, effectively, the institutional vehicle through which late capitalism has become global; corporatized elements

such as sport (education, religion, and health domains being equally applicable in this regard) becoming both a product, and an important process facilitating the globalization of late capitalism” (Giulianotti and Robertson 2007).

Ticket sales to major events alone are not sufficient to withstand the rigours of making profitability. The WFOC in general and its drivers, teams, promoters and others in particular must rely heavily on corporate sponsorships to complete their budgets and allow for growth opportunity. “Corporate sponsorship is used by marketers as an instrument to enhance brand equity through raising awareness and creating positive brand associations in the minds of consumers (Gwinner and Eaton 1999, Meenaghan and Shipley 1999, Lebar et al. 2005)” (Groza, Cobbs and Schaefers 2012).

The available institutional structures of WFOC commercialism are complex and the ways in which they can be exploited varies by target audience, cost, objective, and type of medium. This research has pinpointed and defined the factored vectors of marketing imaging that realizes the WFOC as a formable global commercialized agency.

003 (USA, journalist) told this research that the cost of a major sponsorship can vary from \$100 million for a top three team to \$10 million for a bottom grid team per year. A minor sponsorship with a top team can bring in \$1 million or more in revenue. Ferrari attracts the most sponsors, accounting for up to \$200 million. Other top teams bring in about three-quarters that amount. Even back markers can attract several million dollars in sponsorships. Toyota spent a reported \$400 million to support its own team from 2002 to 2009. Infiniti sponsors the Red Bull team with an annual contribution of \$40 million because that team uses motors from its parent company Renault, thus a one of a kind inter-connectedness.

5.2.1 Advertising

Advertising is a function of marketing designed to convince its targeted audience to effect, consume or purchase a select ideology, product or service. Commercial advertisers use a branding technique to associate the product name and/or image as a way of qualitative interchange to induce or impress consumers. Print advertising in publications, billboards in urban areas and on highways,

voiceovers on radio, and audio/visual communication on television are all traditional methods of communicating and advertising media. Advertising effectiveness is measured by its ability to reach markets with the power of the continued frequency of its message.

Dant (2004) connects advertising with the automobile: "The car has become ubiquitous in late modern society and has become the leading object in the ordinary social relations of mobility. Despite its centrality to the culture and material form of modern societies, the relationship between the car and human beings has remained largely unexplored by sociology" (Dant 2004).

However, the WFOC is unique in its system of delivering an advertising message with a particular race team because: 1) the F1 car becomes a moving advertising billboard, causing the image of the advertised product to be associated with the elite, popular, and high-tech sport, 2) massive global television coverage affords repeat exposures in a single telecast, and 3) an international schedule offers continued coverage throughout a calendar year.

On-car advertising is further compounded by other positive ancillary effects: 1) product name and/or imaging on the team's transporter and other vehicles, 2) product name and/or imaging on the clothing and uniforms of the drivers and team personnel, and 3) product name on entries and promotional and public relations materials to generate other accessory advertising effects. Sponsors will often produce other advertising that will use their WFOC association as a ringing endorsement. Companies weigh the value of such exposure, indicating a cost-effective formula when television is contemplated. Advertisers on the Ferrari cars overshadow other hype partakers in the percentage of television advertising value gained. The six-year period between 2003 and 2007 netted over \$4.2 billion in advertising revenue to WFOC teams, of which almost \$1 billion was spent with Ferrari. 015 (UK, WFOC engineer) believes Ferrari does not deserve such a heavy payment: "The traditional value to the championship of Ferrari is overstated today." This research counted no less than 25 North American trans-national corporations that have sponsored a WFOC team during the past decade in a major or co-major capacity, including Anheuser-Busch (Budweiser), AT&T, Boeing, DHL, Dell, Du Pont, Federal Express, Hewlett-Packard, IBM, Infineon, Labatt Brewing, Mexico Tourism, Mobil, Molson, Motorola, Altria Group owned Philip-Morris (Marlboro),

Symantec, and United Parcel Service. All are American except Labatt's and Molson Coors Canada, which are Canadian, and Mexico Tourism and TelMex, which are Mexican.

The WFOC as an event is more mainstream in its ability to deliver an advertising message. Trackside advertising billboards deliver solid global reach and frequency statistics for advertisers and the FOA bills approximately \$165 million in revenue annually. This research can report at least six North American advertisers that have purchased trackside billboards at WFOC events in the past decade including Anheuser-Busch (Budweiser), DHL, Expedia, Labatt Brewing, Mobil, Molson Coors Canada, Altria Group owned Philip-Morris (Marlboro), SAP, and TelMex. (Reid and Sylt 2007).

5.2.2 Corporate Entertainment

Corporate entertainment is the professional term for hospitality and is considered a special event. It allows clients, employees and other VIP types the opportunity to get close to the cars and drivers the company may be involved with as an incentive to increase sales or corporate morale. The WFOC, and all major world sports, use corporate entertainment to maximum benefit to reach company objectives.

"While sports sponsorship has attracted strong interest and increasing investment from marketing professionals, the literature seldom investigates empirically the process by which sports sponsorship decisions are made," say Farrelly, Quester and Burton (1997). Corporations integrate sponsorship into the broader marketing function at different levels of the organizational structure of which corporate entertainment is at the forefront. (Farrelly, Quester and Burton 1997).

The WFOC accommodates the need for corporate hospitality with its own elaborate suites and compounds called the 'Paddock Club'. "F1 and corporate hospitality go hand in hand. More than 300 brands sponsor the series and each has at least one representative who looks after the partnership; they need somewhere suitably impressive to entertain their clients. The Paddock Club

provides an experience found nowhere else in motorsports and for a good reason” (Sylt 2013c).

Sylt (2013c) describes the ‘Paddock Club’ as having three distinct sections: 1) The Villages, 2) Pit Building Lounges, and 3) Pit Building Terrace. Each provides its own taste of the WFOC and cost determines the access to the actual pit area showcasing the teams that can be achieved by the company for its guests. “Sponsors use this opportunity to indulge their own clients in opulent surroundings” (Sylt 2013d).

“In short, the Paddock Club keeps F1’s wheels turning.” (Sylt 2013c). In 2011, hospitality accounted for \$140 million of Formula One’s total revenue.

5.2.3 Marketing

Marketing is the discriminating operational act of all business and literally encompasses all of the communication capacities in this section. In this context, marketing is considered as the exclusive business functions of the companies involved in sponsorship of a WFOC driver, team or event as a secondary programme. This would include advertising, brand management, entertainment, promotions, public relations, and sales as its primary corporate message, but utilizing its WFOC association as part of its overall communication measure. An example would be a promotional contest internal or external to a WFOC event or a print ad using a WFOC race car as part of the creation. It is not a function of the WFOC.

5.2.4 Media, Including Television

Integrated global journalism provides the WFOC with its most dynamic force for reaching its fan base. Regular newspapers and specialized publications bring the WFOC to virtually every country by mention or in detail in varying degrees.

Television, however, emerges as the most potent single factor that fuels the WFOC as a global sports complex. During the past eight seasons, television revenue for broadcast rights has consistently been in the \$380-400 million range

yearly. Commercials for those televised races have produced an average of an additional \$80-100 million annually.

Almost 600 million worldwide viewers watch WFOC television coverage each year. The US ranks tenth in the total number of viewers, with under 0.5 million viewers. Canada and Mexico rank amongst the next ten nations. The Canadian Grand Prix constantly places with the most-watched F1 races on the schedule, attracting over 50 million viewers. It is assumed that the last US Grand Prix, at Austin in 2012, received similar viewership (Reid and Sylt 2007).

5.2.5 Merchandising

Merchandising in the WFOC is the same as in all sport and in corporate activities, which is the availability of paraphernalia suggesting the association with the property. Caps, jackets, key chains, shirts, and other equipment qualify for merchandising. In the WFOC, four types of association exist: 1) Formula One or a Formula One event as the general message, 2) a particular driver, 3) a particular team, or 4) a particular company.

5.2.6 Sales

Sales are the final act and the ultimate goal of a commercialized sponsor after its marketing endeavours have been executed in relation to its involvement in the WFOC. Sales are the anticipated return on its investment of utilizing the WFOC as an advertising and marketing vehicle.

5.2.7 Trade

Trade is typically restricted to companies that can offer the WFOC administration or a WFOC team an integral product or service in exchange for identification as described under the above section on advertising. The idea is barter-based, where reduced or no monies are reciprocated. This conception is more prevalent with, but not limited to, companies providing teams with essential automotive-related products including fuel, oils, tires, and other necessities. A growing trade segment during the past two decades has been firms providing

technical equipment, information and transportation options to both teams and the WFOC administration.

5.3 WFOC's Commercialism and its Inter-connectedness with North America

This chapter confirms not only the corpulent commercialism of the WFOC but its shrouded inter-connectedness with North America. It asks the question: are the sponsoring corporations from North America and other inter-connectedness in the World Formula One Championship integral to a participant's global marketing plan?

Cross (2000) identifies the difference between the successes of commercialism in North America and other places, "Commercialism succeeded where other ideologies failed because it *concretely* expressed the cardinal political ideals of the century – liberty and democracy – and with relatively little self-destructive behaviour or personal humiliation" (Cross 2000: 2).

Freedom has allowed commercialism to win in North America, and principals move swiftly to capitalize on the system. Gene Haas is the founder of Haas Automation, and America's newest entry in the F1 fray, beginning in 2016. Haas summed up the perfect answer, "We are trying to expand our global market [for his machine-tool company]. I can do it with F1. To me, it's the perfect scenario" (Baime 2014).

In the case of sports marketing in general and the WFOC in particular, North America can often essentially mean the US only. Although Canada and Mexico are not stipulated, Henry et al. (2007) profile the strengths and opportunities connected to the American market commercialism that are prevalent in all motorsports and the WFOC. They argue that the US has: 1) the world's strongest economy, with a race culture unique to the US, 2) a very large home motorsport marketplace with very competitive product pricing, 3) a spectator-centred motorsport culture, 4) a good mid-level technology/price ratio, 5) a strong sales and service ethos, 6) a well-developed ladder of opportunity using similar technology, 7) financial self-sufficiency, 8) high levels of grassroots participation at low cost, and 10) a growing presence of motorsport trade associations. Opportunities in the US are also of a distinct advantage: 1) low production costs of

mid-price, mid-technology motorsport products leads some overseas firms to move production processes to the US, 2) state-level government aid to attract overseas firms, 3) higher-level supply chain expertise being shipped from Europe to USA and 4) exporting 'spectacle' expertise to emerging centres of motorsport.

The strengths and opportunities position the US as a powerful endorsement of the commercialized endeavour being promoted that can be further exhibited in Canada and Mexico. However, Henry et al. (2007) point out that there are distractions and weaknesses that can cause negative ramifications for the WFOC: 1) a fragmented regulatory framework which has led to in-fighting within series, 2) motorsport is general low tech (compared to Europe), 3) geographically the industry is very widely spread, 4) motorsport culture can be insular, 5) safety is not promoted as well as it might be (a point of argument), 6) no global motorsports presence and limited export opportunities, 7) road racing is relatively unpopular, 8) relatively underdeveloped nature of indigenous technology. This is not to mention the 'major sport syndrome' found in the United States and Canada, and the intense competition with soccer in Mexico. In their final analysis, threats emerge: 1) the litigious nature of USA society, 2) domestic OEM weakness compared to other rivals (i.e. the Japanese and the Middle East), and 3) further fragmentation of regulatory bodies.

The most consistent universal thought learned in this chapter is that the WFOC needs North America more than North America needs the WFOC. This is a view shared by both sides of this equation. The distinguished publisher 021 (USA, journalist) offered a simple logic: "They are much better off with it than without it." The reasons vary in consideration of fact, bias and geography.

Henry et al. (2007) already pronounced the US to be the strongest economy, so gaining the support of the business initiative is vigorous and recurrent. 013 (USA, corporate executive) was adamant in his assessment, "Yes [the WFOC in North America is a good way to advertise] for a North American company, depending on the product and how well the company employed to brand manage the product does its job. For example, an early morning live Formula 1 car liveried up in a NBC, ABC, CNN, or the FOX news early morning show related to the new Austin F1 race, but more importantly next year's New York City race would have more impact than a promotion at the race, or on a local Texas news show".

This research spent considerable time with 011 (USA, FIA executive), which was a coup, who added on this point; “I guess you would say it is [commercial cost-effectiveness in the WFOC]. They come and go on that end of it but not for the lack of value though. The good ones stay and they are willing to pay more to stay in”. He noted differences in geography: “Local advertising strength is very good in Canada and it was excellent in Mexico in the past too. There was a company called Iceberg that sponsored the US race in Phoenix years ago. We didn’t know what kind of company it is but Iceberg was a high end clothing company. I didn’t know that until I got an Iceberg sweater later that year as a gift. So advertising in the US needs to be done heavily because there is so much competition. Companies need to be cautious if they are going to do it. Sometimes you see big companies like Coca-Cola avoid it but its local subsidiaries do it. People get confused easily”. He leaned to competition causing this confusion. “We can still get by with Indy Cars and don’t really need Formula One”. This is the kind of threat revealed by Henry et al. (2007). To learn the stance of the WFOC, the research asked, ‘*Does the WFOC see America as the largest marketplace in the world then?*’ 011 responded affirmatively, “Oh definitely and that’s the direction Bernie is taking it. He knows it needs to be here. Everyone wants to be here. That’s a given. I am of the belief that the United States Grand Prix can displace the Indianapolis 500 as the number one race in America sometime in the future”.

In its heyday, the Indianapolis 500 drew upwards of 700,000 race fans on race day. It still consistently attracts crowds of close to 400,000 on race day annually. The attendance at the US Grand Prix at Indianapolis drew 185,000 fans consistently on race day from 2000 to 2007. The 2013 USGP at Austin had a race-day attendance of 120,000 and a three-day attendance of approximately 270,000 people. There was a moderate increase in 2014, but still a great differential between the two events according to 003 (USA journalist).

The Ferrari factory has actually toyed with the idea of building a car for the Indianapolis 500. The American market has traditionally been its largest market. Marco Mattiacci was Ferrari’s North American CEO until April 2014, when he took the helm of its F1 team for the balance of that season, and he understands the market’s importance: “In the United States, we see that F1 is getting traction. My focus as a company is where 30% of the sales are [in the] United States. I want an

extra race in the United States. I want three races in the United States. That's my proposal because the American market is fundamental to generate revenues, to attract sponsors" (Cooper 2014).

The research asked 011 (USA, FIA executive), *'If you were a large corporate executive, let us say at Sears, would you use the USGP to promote your name or products?'* "If I was a major stockholder of a company going racing I'd need to ask why. I ask why because nobody gets full value. But yes I would and I would need to find a way to get full value". The WFOC offers several vehicles to potentially advertise in North America: a North American driver, a race team or a WFOC race, but the choice is confusing because of reach ability and cost. "This depends on how much money. If it was between a race and a team I would probably try to find a way to do both. A team would be my first choice, though. I believe there are more possibilities to get value with a team". Corporations have already embraced racing as an advertising vehicle in the US and he believes the US Grand Prix also promotes American products worldwide: "I really believe the Indy 500 will eventually be a F1 race someday. The Indy 500 would be the US Grand Prix and that would be bigger than one can imagine. Indianapolis is already there and has all the history Formula One would need in the US. It is built and has all the facilities Formula One needs. The Indy 500 as a Formula One would be an advertising bonanza. And the United States can still have a second race with no problem". 011 also insisted global recognition has already been achieved by American companies in Formula One: "How about STP, the oil additive? This is very much for Andy Granatelli. STP is an American icon and it achieved a global novelty. STP is a logo that can be found anywhere in the world and it built its awareness by racing. STP suddenly appeared in F1 when it sponsored the March team in the early 70s".

STP, standing for Scientifically Treated Petroleum, was a Chicago-based automotive aftermarket company that both partially owned and sponsored the British March F1 team in the early 1970s. Granatelli was STP's CEO at that time.

Other industries and companies, outside automotive-related entities, have found success with WFOC marketing techniques. 011 (USA, FIA executive) singled out financial institutions as one: "Banks. Citibank would entertain hundreds of its sales people who sell traveller's checks. The whole programme was about

selling more travellers' checks and this went on for ten years. Other banks now use the same idea for other banking things”.

Cost can be a negative because the price of involvement is excessive. Special event advertising is a unique category because it tends to increase in better financial times and decrease during times of recession. This executive (011) shed light on the subject of why and when it may be done: “The people who run these companies are like boys that grow up. As they grow up they become more aware. This interest is human nature. So they get this interest in Formula One and recognize ways how to use it. UOP is a good example. Here’s a highly specialized company and they would target just one need. Sometimes they would just bring one person to a race to show them its technology. I remember they wanted to tap into the oil market in Romania. They wanted to build a refinery there. Romania was a Communist country at that time. They simply targeted a government official from its oil office. It worked”.

UOP, Universal Oil Products, was a suburban Chicago-based firm specializing in developing oil refining technology that sponsored an American Formula One team called Shadow and rebranded as UOP Shadow in the 1970s. It is now a trans-national company owned by Honeywell, another American conglomerate.

Regardless, any American participation has obstacles its European rivals do not need to contend with. “American participation in F1 has had to overcome lots of difficulty. Like the owner of the British gearbox maker Hewland once told me, it’s all bigger than you can realize,” 011 (USA, FIA executive) added. The size is first related to WFOC logistics and proximity but it can be more closely related to the imposition to spend and under the concept of the whole WFOC apparatus.

However, 011 (USA, FIA executive) said the deepest connection seems to be people. He maintained that people originating from the Americas are the biggest contribution to F1: “I’d say its people. I had a friend who headed the engine department of a NASCAR team and Bill France asked me to assist him in getting into the garage area at the United States Grand Prix. I was amazed he knew so many people in Formula One. They were all Americans and they were in charge of the engine sections of various F1 teams”. This aspect has been hugely dismissed,

although largely visible. Separately, 002 (USA, SCCA executive) also noted the importance of 'people' in his assessment found in Section 4.6.2.

American technology can be found throughout F1, and the most constant product contribution and branding is carbon fibre. 011 (USA, FIA executive) talked about carbon fibre and tires: "Carbon fibre originated in America. McLaren took it and applied it to race car tubs. Now carbon fibre has a place in much of everyday life. You see the Hexcel name. Tires are another product perfected in America; if not founded by Americans. There is a tire manufacturer in the UAE that totally relies on American tire ingenuity. There are many good American engineers and they can be found everywhere in the world".

Carbon fibre is a graphite material that originated from the American firm Union Carbide but was perfected elsewhere. It is now produced in multiple countries. The American company Hexcel is the leading producer of carbon fibre.

Other American technologies and products often get overlooked because of buyouts, merging and the growth of multi-national corporations. "There are more out there than we realize. American contributions often get lost because these big American corporations often become multi-national," said 011. "There is a good bit of it. It could be more though. England is still at the top in this area of Formula One". Rubber and tires are one historical example, as Firestone and Goodyear, both American companies, have been part of the WFOC at one time or another and often at the same time in name or as part of another global company.

003 (USA, journalist) believes there is a misunderstanding by the WFOC on how to succeed in North America, and that Canada, Mexico, and the US represent three very different markets. "The problem that both the F1 teams and the championship encounter is that neither really knows how to sell into the North American market. It seems that they expect North American commercial interests to come to them".

The research asked 003 specifically if there is a global understanding of the monies spent by North American trans-national corporations and other North American companies in the WFOC and he replied, "Relative to contributions made by North American companies, only US-developed technologies are applicable. Second, due to the disparate ways those technologies found their way into F1,

there was no unifying consortium that highlighted the US contributions. If the France family had influenced the focus of ACCUS that entity would have been a perfect vehicle by which US contributions could have been promoted”.

Success for the WFOC in North America has been a daunting task in its entire history and the search for its solution has been compounded by various answers to remedy the plight. 003 continued, “The ambivalence is that much greater to the extent that neither the teams nor the championship are willing to invest to create the next Mario Andretti. This is a ten-year period to produce. An Andretti type of personality would quickly and greatly increase the interest of Formula One in North America due to such a persona being larger than life. There is an analogy that might be applicable. Soccer is the most popular sport in the world but is a bust in the United States except amongst the Hispanic and some European expatriate populations, in part due to the lack of an international American soccer superstar. Taking the analogy further, there are Olympic sports such as track and field and alpine skiing that enjoy a degree of notoriety and popularity in Europe during non-Olympic years. Their audiences are not that tremendous in the off years but there is some interest. In the United States, the interest in Formula One is even less than those Olympic sports generate in Europe. Thus when considering the contribution of soccer and the non-Olympic years of track and field and alpine skiing on the United States and vice versa it barely registers on any meter”.

The Sports Car Club of America (SCCA) has always enjoyed a strong relationship with not only the various Grand Prix of the US but also the races in Canada and Mexico. Product licensing has always been part of its marketing plan and 002 (USA, SCCA executive) played an integral role in its domestic and international licensing. “The automotive industry is technically laced. The SCCA would enter into agreements with companies from various fields in high performance and safety to endorse or promote products. The SCCA also provided a test bed for firms in competition and even held closed testing events. The biggest cash cow would be the name Trans Am. The SCCA ran a series for sport race cars called the Trans Am and they own that name. They in turn leased that name to General Motors. That’s how Pontiac got to use the name Trans Am for its road car. Years back, Pontiac advertising would always say something about the car being test proven by the SCCA”.

Some opinions are conditional, as 007 (USA, journalist) attested, “You have to differentiate between Canada, where F1 is hugely popular, and the US where it is not. So the answer is yes and no”. However he ultimately agreed that the WFOC is an effective way for North American products to be advertised and marketed globally: “The answer is yes because of F1 being a massive worldwide audience”. He pointed out specific automobile manufacturers and products, “Ferrari. I believe for Ferrari and Mercedes, the United States is the number one marketplace for each. AT&T and Mobil are two prominent companies that immediately come to mind”.

Some North American observations may be indifferent to this connectedness. 028 (CAN, journalist) said, “Formula One is a simple formula. Whoever engineers best wins on the track and its sponsors will win in the market. This works keenly for products that are closely related to the automotive industry like oils or tires. Car manufacturers like this connection too, although it can be difficult to sort out. Not everybody can go out and buy a Ferrari, for example. Renault is not sold in the States but Infiniti is. It can be confusing”.

Infiniti and Renault are both owned by Nissan. Infiniti has been a sponsor of the Renault-powered Red Bull team. Both car makers are mildly identified with the team. As expected, the factory Renault began to compete with its own team in 2016, and its customers, like Red Bull, will utilize a Renault motor badged as a TAG. This is a practice used from time to time to maximize commercial and technological resources for two brands under one corporate umbrella.

006 (CAN, F1 promoter) believes there is a general lack of connected participation and visibility: “Not too many is the fact. The major North American corporations currently visible as sponsors are Exxon-Mobil with McLaren and AT&T with Williams”. He believes the consumer masses do not understand the connected concept companies employ with the WFOC, “I don’t think so. It’s more about the race and the racers”.

Mexican scrutinizing is typically more emotional and enthusiastic, as Televisa’s F1 announcer 029 (MEX, television) explained: “F1 is magical in Mexico [he subsequently referred to the success of the recent Mexican Grand Prix]. It can be a [Mexican] team and that would be something more than unbelievable. However F1 can sell anything [in Mexico]. A top team can sell any product. A

Mexican driver [even more so]”. However he admitted this excitement does not necessarily extend north of the border, “I think so in most places like Asia and Europe [ability to sell anything in general terms]. There are better ways to advertise in the United States with baseball and football”.

010 (MEX, Indy-car driver and F1 manager) concurred about how Mexico can be connected to the WFOC: “Mexico will always be different though, because of the passion we spoke about. F1 can be a very strong way to advertise in Mexico if there is a connection. A driver connection is what I am saying, to start the passion. Mexico seems to find a way but needs to be sustainable over a longer period of time”.

He (010) spent the majority of his career in America driving Indy Car and NASCAR and offered his perspective on its disconnection from F1. “America is interesting. Americans are used to NASCAR. NASCAR rules in America. Americans do not know about the sound, technology and the myth of Formula One. They are used to sprint cars and oval racing. F1 needs to go to high end markets like New York or San Francisco. They need people who understand what a Ferrari is”.

As a well-connected celebrity in his homeland with government and corporations, 010 finds it difficult for Mexico to afford F1 attachment, “It’s way too expensive in my opinion. Companies and its CEOs must have the same passion to share. That’s why we must leverage the driver. The whole package must be around the driver to be successful. You need to be passionate and the sponsorship of the driver can provide this best. The smallest race car sponsorship is so expensive you can’t get much out of it. That’s why the driver is so important”.

014 (MEX, OMDAI executive) was animated in his responses about Mexico and the WFOC. The research asked: *What commercial product can work best to advertise Formula One in Mexico that has proved successful in Europe?* “I say banks and other financial firms. Banks have worked well for American banks in Europe to sell traveller’s checks for example. We are Mexicans first and we are greatly influenced by our neighbours to the north. We want to be like them in many ways because of its successes. But we are still Mexicans and we have our own ways, too”.

He justified his government's involvement and how Mexico can advertise in F1 with the obvious answer identified in the previous chapter: "Tourism [as a connected commercialized product], mainly for it being a history enriched country which we have all sorts of activities and venues for the holiday and business traveller. Mexico's main two groups of tourists are USA first and then Canada".

Mexican culture is also seen as a proud product and a way to link itself to the sport and world neighbours, "Unlike America, in Mexico it depends upon pride and nationalism to be a sponsor. The US is more sophisticated so they are doing it for global marketing reasons. The American goal is to relate F1 to make sales to make money. That's not the case in Mexico".

014 sees trade as a vehicle of being connected, particularly with the US. "American products are prized in Mexico. There are many globalized American corporations that have supported our past events. We appreciate this support as it helps us succeed overall. Due to this genuine growth we are very sure American companies will increase its support to reach its objectives in Latin America".

020 (MEX, FIA executive) related this connectedness through advertising to globalization, "Globalization is the next step for a communication style in the world and the arrival of freedom on the economic bases of the countries. The following step will be the migration of the people, first the qualified and then the less prepared people. We will see in the next 10 years the migration of people to the advanced countries. Those with natural resources will get the arrival of new capital and those with open economies supported by international trades will receive more permanent investment. Motorsport is related to the economic development of each country. Racing could be done with all kinds of budgets. To be competitive, one requires more resources these days and globalization could bring new resources to racing as it is also related to advertising. We could expect better times if we have serious promoters"

Engine guru Herb Fishel advocates a stronger link between motorsports commercialism and the marketplace: "The US domestic motorsport scene is currently one of marketing bliss. It's strictly about delivering TV numbers, about how many people watched the telecast. It's focused on the personal attraction of the race drivers, not around car manufacturers' brands. Based on fierce

competition for brand identity in a global market, automobile manufacturers will soon demand equal billing with the driver and other consumer sponsors” (Henry et al. 2007).

Generally speaking, throughout this research the mood was more positive from outside North America about a need for this connection. The connectedness is enjoyed by both sides, but a tendency flourishes for necessitation by the WFOC. A former F1 driver and current Grand Prix Driver’s Committee (GPDC) executive, 018 (BEL, F1 driver), stressed simplicity but opportunity in this regard, “At the moment it is still very expensive to go to the consumer market in most places. There is no need to go from point A to point B. The consumer market is strong enough without F1, plus there is no mood to actually do it. There are greater possibilities in China, India or North America if you are going to do this with F1”.

5.4 The WFOC and Innovation and Technology

Commercialism and technology can become entangled in the WFOC. It can be difficult to differentiate when technology is a beneficial science, an advertising tool, or acting together. Here we attempt to answer that single pivotal question and other queries by way of empirical knowledge learned from experts in their respective fields relating to the WFOC’s technological innovations and its commercialized agenda.

Americans conventionally have had a stronger attraction towards the connection of commercialism influenced by technology. Head protection is a significant technological category, and one executive, 013 (USA, corporate executive), from a leading global helmet manufacturer, explained why this parallel exists: “The reasons are primarily twofold. F1 as the pinnacle of world motor racing from a leading edge technology and dollar perspective is the venue where a top helmet company must have exposure and a presence to be viable as a brand on the world stage. And F1 exposure builds the brand for Bell’s other helmet product lines, for example, bicycle ski, snowboard and motorcycle helmets. Furthermore, being actively involved in F1 serves a critical R and D

[research and development] function that enables Bell to continually advance and evolve helmet designs for the most demanding needs”.

There are a horde of ways to accomplish a commercialized technological relationship, from uncomplicated to perplexing. He explained a more moderate approach, “At the time I was involved, Bell provided helmets to professional drivers and crews. They also manufactured driver and crew uniforms made of fire-resistant materials and did all the custom sponsor embroidery. Shoes, gloves and other safety accessories were sold by Bell back then as well”. In consideration of the need for these types of product, its involvement and expenditure was effective. “Well I really don’t know how to break it all down but it is a highly cost-effective vehicle, meaning we don’t need to spend as much money as others in the sport to establish our presence to what we need. Bell spends some monies on advertising to its retail market. More is spent with R and D. Servicing by having a representative at the track to take care of performance needs during a race weekend is our only major expense”.

Electronics is a fast-growing and more complex category with notable WFOC participation by American companies. Former high-level executive and engineer 031 (USA, corporate executive) identified this area for comparison’s sake. “We are a provider of electronic management systems”. The research queried the cost and, as expected, the answer was evasive but positive: “I am not sure how you justify it because there are so many factors in the cost and what you actually get out of it. We’ve been at it off and on a long time and I could say that we like it”.

Marketing is not necessarily limited to print advertising, as further investigation with 031 confirmed: “Generally speaking our Indy-car programmes were more cost-effective for us but you can’t ignore Formula One either. When we did Indy-car as a main sponsor, our objectives were different. It was based on two goals. First was to entertain our most important clients here in the USA and also to reward our own employees at home as well. There is more than one company with the *[withheld]* name so we wanted to make awareness that we are the automotive division of *[withheld]*. Generally we are the ones being entertained by the teams using our stuff. Sometimes we will bring some guests along but it’s a long way to get to most F1 races outside of Montreal and Austin. Our visibility is pretty much limited to servicing our things and making sure our sticker is where it is supposed

to be". This analysis, the fact that other automotive firms were entertaining electronic companies, illustrated the demand for this technology.

These kinds of observations are not limited to Americans, as 015 (UK, F1 team engineer) attested, "There are manufacturers and there are sponsors who are suppliers of technology that may or may not have a product that benefits the actual vehicle. Sometimes, as in Ferrari and Mercedes, and I guess Lotus, it is in a company's DNA to compete. Some manufacturers might actually get a transfer of technology but in a lot of cases it is the other way around. I recall using stereo lithography at Chrysler way before F1 teams started using it".

To further this thought, it was asked, *is corporate commercialism in F1 to showcase its consumer technological achievements?* 015 replied, "Yes, but this where the PR and marketing departments come into play. Actually a lot of manufacturers prefer to use long-distance sports car events to showcase their particular attributes to a receptive audience. I recall Jaguar quite often when sales are flagging run advertisements showcasing their Le Mans successes of past years. Mercedes, Ferrari, Porsche, Honda, Toyota, etcetera all in times of fecklessness or parsimony having competed in F1 still run sports car operations".

His conclusion, in effect, is what this research is seeking in part: *is the WFOC an effective advertising vehicle?* "Yes, as it must be recognized that the F1 organization has been very successful in leveraging its PR, marketing and advertising to a far greater benefit than with sports car racing, which arguably has a greater relevance to the general vehicle customer".

015 (UK, F1 team engineer) added this about the corporate culture in the WFOC, "I was at Renault some years ago, after leaving F1 and now with Chrysler I had occasion to test a Renault Clio at Mireval in the South of France. Knowing in general that French engines were of the fragile persuasion, I took my first laps easy, however with growing confidence that the engine would not stick a rod out of bed, I pushed harder. As I became more aggressive, I realized what Renault had seen was the technology in the Toyota Corolla engine ranges. I could in my mind see that materials, technology, reciprocating component balancing, understanding the crankshaft and damping were seen as racing influences either directly or indirectly employed".

015 also spoke about another instance how the transfer of technology can work from one nation to another (and not work), “The programme was to develop a culture on how to work as a team, work fast work, initiatives, etcetera. In fact all the positive attributes that F1 would impart to a corporate structure. Initially this worked very well, but some members of the F1 team within Honda racing were considered too important to racing success to be sent back to corporate Honda in Japan. When Honda pulled out of F1, they believed that the racing team, all its knowledge it gained, would be absorbed into the corporation. Unfortunately many race team members could not face life in the corporate world and left Honda to work in F1 for other teams”.

In this instance, 015 showed how a specific technology transfer, talent, did become favourable to others in the WFOC, “Notably Ferrari benefited in their [Honda] engine programme from many Honda engineers that came over. This was a large loss of face to Honda, as once in a Japanese corporation, workers generally do not leave. So it was a big wrench and decision for Japanese engineers but one which they overcame”.

“Some corporations, not in the automotive or related fields, use Formula 1 to brand and promote their products. Some such as Mercedes, which started out as purely a racing company, after a Finnish industrialist wanted to race a Daimler Benz car approached the company. DB organized a race team specifically for this purpose and not having a name asked the industrialist what he wanted to call the team. His youngest daughter was named Mercedes and the rest is history”. This helps explain how technology can become an advertising vehicle because racing is a marketing tool. The balance of his statement, about the Mercedes name, is of consequence.

WFOC is also a global marketing tool for non-automotive products; not connected to any technology, certain products desire to be related to its design. 015 weighed in: “Tobacco companies very successfully got the world, particularly Asia, to buy their particular brands, generating huge profits. Marlboro and JP Players come to mind most readily using the liveries of vehicles to advertise their brands. F1 is an ideal global marketing platform, except in the USA. Many tobacco companies increased their worldwide sales and in consequence corporate after-tax profits 100 times more than before being a F1 sponsor, especially in Asia where

an untapped youth was encouraged to smoke. Happily that does not occur now and was a case of a product unrelated directly to sport being involved in F1.”

015 (UK, F1 team engineer) gave the impression that the WFOC can sell any product, even distant technologies, as he continued, “I had it mentioned to me once that the reasons that airlines didn’t advertise in racing because all the crashes in racing might detract in the customer’s mind from the safety of an airline. Williams and Saudi Airlines sort of broke that stereotype and now Virgin is heavily involved [since departed] in F1. Which brings to mind Rupert Keegan whose father owned BAF or British Air Ferries and there is a famous picture of him in the air upside down with a sticker on the underside of the car saying Fly BAF”. He effortlessly said there are no restrictions, “Not that I am aware of but I am sure there would be some. I recall my friend Tiff Neddell used to race the Durex FI car. Durex is and still is a high end prophylactic manufacturer. A condom or rubber as you will. It caused a little stir by some outraged PTA groups but not significantly. I don’t think that a gun manufacturer would be particularly welcome but who knows?”

The research pushed him back into the link between commercialism and technology, “Corporations are becoming more aware of linkage of product or the components that they make and being associated with an actual race team. Recently I had a discussion with a company wanting to get back into motor-racing. They are a Detroit tier one supplier and did not want to go to NASCAR where anyone can sponsor a vehicle with products that have nothing to do with the sport or engineering at all. Brands like Tide, Miller and on and on are common there. They wanted to go to a series that they could place engineering products they produce directly onto a car. Ironically battery Hybrid cooling technology was their insight into this. However it must be noted that when that technology does not perform in the race environment, if in the case of the full glare of the world press at an F1 race, then there is a downside also. It can be negative publicity”.

017 (UK, F1 team engineer) explained why auto manufacturers participate in Formula One, “F1 is a market. I suppose because it works for them but they pull out too. It’s a strong market for these firms. I suppose there is an international link because of all the companies in it”.

It is correct that these auto manufacturers journey ‘in and out’ of the sport, but it obviously works some or all of the time, said 017. He added: “People do it all

the time, so yes. If it was legal I think all the cigarette companies would be back in F1. It works just fine for them. I don't smoke but I think it should be allowed. If it suddenly became allowed they would all be back. I think it's all based on the amount of money spent to make it work the right way for any company in F1".

The WFOC championship has evolved in the years, as 019 (UK, corporate executive) said: "When you sell F1 today it is no longer four stickers on the car. It is how it is branded. The branding is the clothing, the news releases, the transporters and the parties". He notes branding is not limited to technology but how it is perceived from inside the corporations, "That's what it is today [hospitality]. It's a total package for the global firm". He suggested that technology and its branding is a given in today's WFOC, but personal relationships harvested through entertainment are the blueprint for sales.

5.4.1 Global Technology

This research uncovered multiple definitions for the meaning of technology. An accurate condensed acceptance is the forceful concentration of scientific wisdom for practical purposes in a particular capacity, especially with commercial and industrial goals. Contemporary examples of technological application would be computerization, engineering, and medical.

A grounded definition of technology is founded in the Business Dictionary (2013) as "the purposeful application in the design, production, and utilization of goods and services, and in the organization of human activities". It continues, "Technology is generally divided into five categories (1) Tangible: blueprints, models, operating manuals, prototypes. (2) Intangible: consultancy, problem-solving, and training methods. (3) High: entirely or almost entirely automated and intelligent technology that manipulates ever finer matter and ever powerful forces. (4) Intermediate: semi-automated partially intelligent technology that manipulates refined matter and medium level forces. (5) Low: labour-intensive technology that manipulates only coarse or gross matter or weaker forces" (Business Dictionary 2013).

Liberal definitions of technology and its inter-connectedness can run rampant. Wolf (2004) connects three factors with his interpretation of technology:

determinism, innovation, and transfer. Wolf believes determinism is exaggerated. He thinks innovation suffers from inequality globally, and transfer allows for flow. Friedman (2000) “defines three democratizations – of technology, information and finance” that make companies and governments vulnerable to the globalization syndrome.

Arnis (2002) concludes, “Transnational corporations are exposed to a multitude of pressures. They are expected to become ever more efficient and ‘business-like’ while being socially responsible; they must variously accommodate homogeneity and heterogeneity across different functional areas; they must reduce inequities while maintaining profitability. Consequently, strategic initiatives must account not just for economic shareholder expectations, but also for political, legal, and social responsibilities to which they are increasingly held accountable (Parker 1999). This requires re-conceptualization of business practices that allow managers to enmesh traditional competitive practices with an understanding of what is required to operate effectively in a post-modern political economy with its accompanying emphases on rapid technological information, interdependence global networks, a changing and perhaps ephemeral nation-state, and altered patterns of consumption. While we have seen how one trans-national brand is positioned to cope with a functionally changed operating environment, we require more in-depth analyses of managerial practices that allow the multiple and complex realities of the strategy making processes within (transnational corporations) to be better understood” (Arnis cited in Silk, Andrews and Cole 2005).

Dicken (2003) understands theoretical involvement with its immense complexity by asserting that inter-firm linkages are the most important channels through which technological change can be transmitted. In *Global Shift*, vast scores of comparative information on the geo-economy based on the geo-map can provide an academic rationale on the collisions the research may encounter. Dicken calls this a fundamental redrawing of the global economic map into the twenty-first century.

“However, and as Jenkins (2002) argues, the proliferation and spatial reach of the transnational corporations, while affecting the activities of national state powers, does not necessarily transcend the local in respect to national loyalties” (Silk, Andrews and Cole 2005).

5.4.2 Dedicated Technology

In this research it was learned that 'dedicated technology' means technological development that has been exclusively produced by and for specific use by the WFOC or an individual WFOC participant. However, this development is not ultimately limited to these two areas, as there is a residual effect whereby some of these developments reach the global consumer market, with the obvious essential alterations.

As each car in the WFOC is the draconian intellectual property of its team, the chassis becomes the foremost model of dedicated technology. Size, weight, and structural integrity are tightly governed by the sporting rules and determine the basis of the car. All race cars must be scrutinized to pass the same impact testing to assure their ability to survive a high-speed incident, but differ in their design perspectives; meaning each car is of its own design but in accordance with complied with and shared rules.

Restricted use by the WFOC is possible because of certain regulations that require its participants to use the same specification product. The most apparent archetype is the application by all WFOC teams of a spec tire. There is an assortment of other shared commodities required as a partial or full component in the actual vehicle. Another model shared by all teams is the Electronic Control Unit (ECU) and its related software. The utilized programmable software must be registered to manage essential control. There are some examples where choices of certain materials or metals can be offered as an option. Television cameras, timing transponders, and head protection are examples apportioned outside the race car.

Contesting WFOC teams and their cottage industry sub-contractors seek an individual competitive edge by developing their own technology in areas that allow greater freedom and ingenuity outside the regulations. Aerodynamics and suspensions are distinct examples of areas allowing more artful interpretation. Braking, engines, fuels, transmissions, and wheels are investigated more closely but still permit enough inventive genius to create a potential advantage. A significant amount of espionage between teams to steal technology has been found over the past decade, illustrating the intensified importance of the most recent technology.

The priority of the dedicated technology employed by the teams is for their sole benefit. The spill-over into the consumer market can be intentional through relationships or borrowed. What becomes clear from history is there is an absolute connection between current Formula One technology and the introduction of future consumer automotive products.

5.4.3 Auto Industry Technologies

While most automotive technologies are born in the research and development departments of the actual manufacturers, some of the most innovative technologies are actually derived from Formula One. This creates a unique advertising testimonial for the industry selling road cars to its consumer markets. In contrast, it is unlikely much auto industry technology actually directly affects Formula One. This is because those technologies are massively altered, for example electronics, to fit the strenuous demands of F1.

Although debatable by those outside of the WFOC, *How Stuff Works* (2013) names the Top Ten technologies derived from motor sports transferred to the consumer market: 1) Safety, including structural integrity of a vehicle, restraints, and the addition of rear view mirrors; 2) New materials, including lighter and stronger materials like carbon fibre; 3) Exterior design, for example the surroundings of the driver's compartment like the steering wheel, controls, and dashboard; 4) Dual overhead camshafts, essentially motor development to go faster and smoother while using less fuel; 5) Engine air intakes, a combined form of air flow aerodynamics and motor development to reduce pollution and be more efficient with fuel; 6) Brakes, including heat controlled elements that allow brakes to have a longer life and the ability to stop in a shorter line; 7) Tires, allowing superior traction, longer wear, and higher speeds; 8) Suspensions, permitting a more stable ride with less wear on other components; 9) Time-savers, like push button starters and gauges for the driver to read to understand real-time conditions; 10) Transmissions that govern the smooth transforming of gears to attain and reduce speeds with fuel efficiency (How Things Work 2013).

5.4.4 WFOC Technology

Formula One technology grasps all five categories of technology; but it transcends as a 'high-level' technology as described earlier in Section 5.4.1 on Global Technology.

Acquired 'high-level' technology, in design, is not necessarily a physical property. However technology is a real global product. There are several aspects of Formula One technology that have a direct impact on everyday lifestyles globally: 1) Advancements and developments in the automotive industry, 2) Developments in the computer software field, 3) Medical achievements, and 4) Equipment safety industry developments

The WFOC has a need to develop technology and there is a global necessity to share it: "Whilst Formula 1 is a global motor racing spectacle, each team relies on technology and the ability to continually innovate in order to outpace the competition. Innovating is concerned with continuously enhancing performance. It is about creating new opportunities, whether these be related to a product, technology or process. The point of innovating is to create new sources of performance, to find new ways of doing things that improve both the efficiency and effectiveness of processes" (Jenkins, Pasternak and West 2005).

Many experts in racing and especially in Formula One will attest to the sport's contributions through transfer of technology. Herb Fishel, the retired manager of all motor racing at General Motors, was responsible for the successful transformation of North American ingenuity in world motorsports. He identifies a robust universal yearning for involvement in motorsport at many levels. In Henry et al. (2007), Fishel says, "I don't see from area to area, region to region, any lack of passion, enthusiasm or excitement about cars. If that is a given, then they are going to pursue, with that very interest and enthusiasm, whatever vehicles and race products they can make". He looks at technological advancement as a conduit to send motorsport technology into other forms: "There is, as yet, no measureable return from a technology, a process or a component standpoint. The really great things about building and racing a race car – the unique design approach, the rapid development, the innovative engineering, the accelerated processes – all these are intangibles behind creating a winning solution" (Henry et al. 2007).

Links between the WFOC and technologies are copiously supplied: Gulf nations and other oil-producing countries have linked their connections with the WFOC with making progress on fuel consumption. A dominating gearbox specialist in the WFOC uses its experiences to springboard into the global consumer markets for transmissions. Multiple trans-national automobile manufacturers utilize the WFOC as a test bed for their motors. Tire companies test and develop their rubber on the WFOC racetracks. The past and present technological connections with the WFOC are well established, documented and verified, according to 032 (USA, WFOC driver).

Furthermore, Henry et al. (2007) argue strongly that the motorsport industry, particularly the WFOC, is about to enter an extraordinary period of time where favourable conditions will prevail for technological advancement: “This opportunity is coupled with a global requirement for the development of alternative, more efficient and less carbon-intensive automotive technologies” (Henry et al. 2007).

Technology found in the WFOC comes with significant risk. There is substantial cost and possible failure: “The nature of Formula 1 as the pinnacle of motorsport technology allows us to focus on the role of technology in supporting competitive performance. Frequently technology is seen as both an enabler of high performance, but also as a huge cost; a potential ‘black-hole’ that can quickly devour an organization’s resources for no benefit in performance. This is a tension that is particularly evident in Formula 1 where many high-budget teams have been unable to translate superior technological resources into enhanced performance. Formula 1 therefore provides the ideal context for us to consider this problem” (Jenkins, Pasternak and West 2005).

There is some polarizing dispute: in *Motorsports Going Global* (2007), former WFOC team principal David Richards disagrees: “This area [motorsport as a contributor to technology development] has now gone, it is just a perception created by the sport. The technology on road cars today is way ahead of motorsport. Formula One teams are not using any revolutionary technologies at all” (Henry et al. 2007).

In the same work, WFOC engineer and chief technical director Pat Symonds, a proponent of hybrid technologies, feels motorsport potentially misses

an opportunity for new technological developments including the introduction of diesel engines in Formula One and other offspring technologies.

In the end, technology in the WFOC is subject to pervasive constant change: “However, technological advances are tempered by the impact of regulation,” Jenkins, Pasternak and West (2005) remind us. Regardless, it is clear that the WFOC is a hotbed of technological activity and transferrable advanced innovations (Jenkins, Pasternak and West 2005).

5.4.5 Technical Partnerships

Technical partnerships are deliberate and are designed to execute a circumstantial operation. The concept of a technical partnership is unique because it concedes parallel technical feedback between competition teams and corporate partners. This arrangement particularly allows for a fierce commercial and promotional environment for competing product sponsors on a global marketing platform which can involve the additional element of reparation for involvement.

In the WFOC, multiple automobile manufacturers enjoy the technical partnership concept because it 1) allows the resources of both the race team and the auto maker to share and apply technologies learned separately, 2) creates a real connection or an illusion of a consumer street car with the most technically advanced race car, and 3) supplies monies to a race team, in form of sponsorship, from the car company as part of its advertising campaign. Such relationships are presently apparent with multi-national giants as Ferrari, Renault (also advertised by its Infiniti brand), and Mercedes-Benz, although the Ferrari approach is more subtle and relies on its reputation as opposed to advertising. Honda is to re-enter the WFOC, which will increase the count to four automobile manufacturers representing four different countries.

Jenkins, Pasternak, and West (2005) name the ten key areas of manufacturer of a F1 car as: 1) composites, 2) electronics, 3) models (for wind tunnel use), 4) components, 5) quality control, 6) machining, 7) fabrication, 8) heat treatment, 9) finishing, and 10) casting. They note that electronics, components and casting may all require outsourcing.

Large corporations that produce brakes, gasoline, oil, spark plugs, tires, and an array of other parts, that have a vested interest in the global automotive aftermarket can justify the huge expenditures of supplying in a technical partnership by their association with the most advanced motorcars in the world. Such parts and products are essential to each team in the development stage and on the track. The partnership supply also reduces the operational cost to the teams, thus generating a win-win situation. The companies, some speciality, staunchly challenge and adapt new concepts of interest to the teams. The WFOC, through its selected teams, offers a test-bed for feedback to assist in producing new and superior consumer products.

Smaller entities can also participate in technical partnerships but to a proportionally lesser degree. Head protection is an industry where multiple producers are engaged in the sport. Safeguarding brain injury is of prime importance to the WFOC, and these bantam manufacturers are in steadfast evolution to build helmets that can be used in military, sport, and other applications.

It is conceivable that some companies seek to 'buy into' a technical partnership. This occurs when a product is marginal in its possible use to a team but seeks a linkage for advertising purposes. Car products, like wax or a rubber protector, may secure this kind of involvement through sponsorship.

It was concluded that it is possible for a commercial sponsor or supplier to act both with dedicated technological intentions and as a technological partner. A WFOC team, while not limited to a singular role, has a greater tendency to accept and concentrate as a dedicated technological partner. It was less likely that a WFOC race team would masquerade as a technical partner without some considerable financial consideration.

5.5 Types of WFOC Industries that Inter-Connect with North America

This research found that two of the pre-eminent technology types discussed, dedicated technology and technological partnerships, form the foundation of all WFOC technologies. Here we try to create a better understanding of what exactly defines WFOC technology, which Formula One technologies do transfer to the global consumer markets, and how this becomes attached to North America as both a provider and a recipient.

This research counted 268 technology-related companies involved in the WFOC in the past decade, in terms of teams, manufacturers, and organizing committees in different types, sizes, and countries of origin. Conceivably this number may be greater.

As these technologies are not always obvious and/or accessible to the ordinary person, so 021 (USA, journalist) provided how one would identify these applications. His clear response was, “All you need to do is walk down pit lane. It’s everywhere and it becomes easy to see when you walk into a [automobile] showroom or a car parts store”.

To better understand this aspect, the research sought enlightenment on how information is transferred in actual situations. 023 (USA, corporate executive) is both an engineer and executive, who works with an aerospace company in partnership with a [withheld] Formula One team: “Mostly we process information for the team. We have an abundance of information and the technical ability to understand newly acquired information that can be useful to the team”. We asked him to confirm if any information goes back to aerospace company learned from racing: “That is not the primary function of our relationship, however there are occasions when the team has learned something that can be useful and they tell us”. This would seem to be an exception to the rule that all technology learned from racing is transferred to the marketplace; however what this actually demonstrates is first a transfer from aerospace to racing and then a second transfer from racing to consumer industries.

5.5.1 Product Safety

One case in point on products is fuel cell technology. Fuel cells are an important but obscure science that has transferred racing technology to the consumer market with regularity. Another engineer/executive from this US-led industry, 025 (USA, corporate executive), commented, “Fire containment was a huge problem in racing not so many years ago. Fire has caused deaths and injuries not only in racing but in street car accidents too. Great strides have been made in fuel cell development to take fire out of the equation the past twenty-five years in racing, airplane travel, military service, marine use, and automobiles we drive to work”.

Head protection is another pivotal technology that shares an international certification for helmets used in Formula One to transfer into consumer markets. 013 (USA, corporate executive) added: “The FIA, which is more of an international standard, is used in F1. The standard is updated every few years. For most racing in the USA, the SNELL Foundation standards are utilized. For example the most current SNELL Standard for auto racing helmets is the SA2010 standard. However different racing sanctioning bodies set the rules they will use”. These standards are ultimately used in the construction of motorcycle, bicycle, football, hockey and other kinds of helmet. The construction of a helmet used in F1 is not a simple process to manufacturer: “[It takes] about a week due to the curing time required for composite outer shells and paint. Otherwise one could be manufactured in a few hours of time. If you added up just the labour time to create an auto racing helmet, it would be a few hours”.

The design of a helmet is decisive because of variables the consumer would not initially appreciate, “The shaping of the helmet for better air flow, ventilation, and composites is crucial and a much longer process than the making of the helmet”. Furthermore, helmet technology also constantly changes, “At Bell we were constantly improving models and making new models. It was not exactly seasonal. Maybe it was seasonal for the marketing people selling to our consumer markets but we were not against making changes as we found newer and better ways at any time”. 013 also underlined its relationship to aerospace in much of this regard, “I believe it is mostly the reverse. Technology breakthroughs in space and aeronautics have been utilized to make helmets safer, lighter and improve

performance. Yes, many of the materials used in helmets today came from the space program technology. Materials like carbon fibre, Kevlar and other advanced composites in shell construction. Fire resistant materials like NOMEX also came from the same source. However, the energy management system you see in auto racing helmets evolved on its own, in the world of auto racing. It didn't come from the space programme per se. Bell actually pioneered most of the major breakthroughs in these kind of energy management systems as they are used in helmet technology today. When I was at Bell in the early 1990s we took auto racing helmets into the wind tunnel for the first time in a very expensive research programme to combat horrible helmet turbulent, buffeting and lift problems that Indy Cars were creating for drivers. This aerodynamic research began with testing and refinements at the race track, with trip strips and such placed on helmets but there was a point where we realized it was too difficult to effectively test, modify and make better designs in this crude fashion. It was somewhat a voodoo approach and you couldn't always rely on driver feedback. The wind tunnel changed everything". Use of wind tunnels is commonplace in F1 today, "Before that you would have drivers saying 'I think the helmet is more stable,' but after we invested in wind tunnel testing and put new designs on drivers, they reported solid, noticeable differences in lift and buffeting. So much so, that the first time we introduced the new designs at Indy, drivers who had been loyal to other brands were clamouring for Bell, just for the aerodynamic advantages. It was exciting stuff. Since then, more time in the wind tunnel has continually improved helmet aero performance".

The primary function remains safety, and 013 explained this objective further, "Upon impact, the outer fibreglass or composite shell destructs or delaminates in a controlled fashion. This is the first line of defence that dissipates energy that otherwise would be transferred to the head. The next line of defence is the inner polystyrene liner. It is designed to absorb energy as it crushes between the head and the outer shell. This is basically how a helmet works. At Bell there are QC checks at every step of the way to insure that each component as well as the final product conforms to standards that are pre-determined. For example every polystyrene liner must be weighed for proper density after it is moulded to its shape, otherwise it will not crush as designed. There is a very small window in which the

liner performs correctly. Additionally a small percentage of helmets manufactured are randomly selected to be tested for conformance to standards. These helmets are of course destroyed in the process by being dropped, having the chin strap and retention system subjected to destructive forces, fire tests, etc. This is internal testing, of course. Certification bodies like SNELL also randomly select helmets from manufacturers and test them. There are protocols that must be followed if a helmet fails one of their destructive tests”.

Performance and safety are not limited to on-track because the company’s profit centre is in the global consumer market. “It is an endless and ongoing process of experimenting with new materials and material configurations in the energy management system of a helmet. This can be slight variations in materials currently used or experimenting with entirely new materials. Impact ‘drop tests’ on the new configurations reveal the results of such efforts. Additionally, there are ongoing improvements that come as the result of experimenting with retention methods, face shield improvements as well as aerodynamic improvements that come from wind tunnel testing. These may not seem at first glance to make helmets safer, but a helmet that buffets less without producing lift and rides smoother in an open cockpit race car reduces driver fatigue and increases safety”. There are specific product points that cause the market to choose certain global brands, “Treated fit pads [are a key selling crux]. SNELL and FIA auto racing helmet standards require a prescribed degree of protection against fire. Fire-resistant materials like NOMEX are utilized in the manufacture of the fit pads that have contact with the head and face of a driver”. The point here is simple: American safety technology is at the forefront in F1.

Like any product, its market plan must consider repeat sales, because no product will guarantee life-long integrity, “Typical is hard to define in this case. Any helmet that has been impacted in a crash should be replaced without reservation because a helmet is designed to self-destruct upon impact to manage the energy away from the user, thus it is used up or at least partially so when it is impacted. The life span question is really a matter of what level of protection one desires within the standards allowed. An allowed standard by a sanctioning body is a minimum requirement. For example a SNELL SA2010 certified helmet conforms to a higher standard than SNELL SA95. So the question is does one want the best

up-to-date protection available. Another thing to consider is that materials used in helmets change over time due to weather, temperature changes, etc. and can even lose some of their original protection qualities. If it's my head, I don't want an old, questionable helmet. F1 demands and requires the most current standards whereas other forms of racing are often more lenient. Mostly it offers less protection because a more modern standard will assume its place, affording more protection. There is also the basic material breakdown I mentioned before".

Brain injuries are a significant problem in sport and outside sport, making research integral for government, industry and medical involvement, "There is room for that and I am sure some government agency does get involved with head protection issues. I am not sure. It would not be for racing per se though. But their findings can be useful to racing and other areas of head protection like civil service or the military. Any head injury. Head protection covers a vast area. That's why it is even more important than we may realize," explained 013.

This leads to the question: *is there a difference in helmet design and construction amongst manufacturers or is it a matter of creative marketing?* 013 answered, "Not really [a difference in design and construction] because they all utilize the same basic principles of managing energy away from the head and brain. The trick and the difference often lie in how they balance the way the components perform and in rigid quality testing to insure that the helmet you buy performs the same way as the ones sent to the standards lab performed".

The WFOC can be singled out as a cost-effective and creative global marketing vehicle for helmet makers, "Minimally really [how much money is spent] because the vast majority of money spent is on head protection research. For us it is not too expensive to service F1. We are in the position of demand somewhat," said 013. The WFOC is also an ideal test bed for this particular product, "It's actually one of the best places because of the level of cutting edge technology in F1 overall, as well as the demands for safety in such a competitive, high speed environment". We asked, *is there a global understanding of the assessed values spent by multi-national corporations in the WFOC and the contributions made by North American companies?* and 013 replied, "No. That's a big time no. The average fan does not think of Formula One in that capacity." Then, *Should all global helmet companies be cooperative in sharing technology to produce the best*

equipment to afford head protection? “That’s a very tough question. The goal is to produce maximum protection and I think we are all doing that. Now we are in a free market society and we need that competitive edge. After all, that’s why we are ultimately in business. So we can’t just give away our competitive edge where we spend large amounts of money to gain our market share. The way we market ourselves is also something that matters here as well. Strong marketing is equally as important as product advancement. Sometimes marketing is even more so with all things technical being equal. Most companies are doing their job and I don’t think there is a need to share technology” (013) In the end, it is all about survival and profit in the market; even for a global safety concern.

5.5.2 Computers, Materials, Metals, and Personnel

The WFOC is a political body of sorts and 011 (USA, FIA executive) was a long-standing American representative with significant stature in the FIA body and believed technology is the common denominator in F1: “It is [commonplace] today. Formula One did not go outside of Europe not too long ago. Now it has spread to Asia and Latin countries. And this growth that went beyond Europe got governments involved. And this growth caused businesses to get involved. In some places, business people are the same as government. They are extremely powerful and dictate what the government does. These elites then can show the world this civilized activity with things like Formula One technology”. He qualified the term globalized industrial sports complex because of the specialized trades it is attached to, “Yes because it is all linked to the technologies it offers”.

He related energy as the most important technology transfer to everyday consumers. “Alternative energy. We keep going back to the gasoline engine and that’s disgusting. We have the right to get the fuel thing under control. We need to make transportation energy viable”. Kinetic Energy Recovery Systems (KERS) are the latest F1 phenomenon, “KERS is an interesting idea. I think it was formed by an American physicist. Formula One undertook this concept several years ago with some success. Now the Germans and Japanese are really involved with this idea for everyday use”.

However, 011 rated other technological advances as more meaningful in the immediate future: “Aerodynamics in vehicles. We are learning a lot of things on how to push air and push through air. Tires would be another product. Wheels are another product. Who would have thought of wheels being made of carbon fibre? Resins of all sorts of applications are an important breakthrough”. He would agree that these ideas do find their way into world markets but can be hard to find: “As I understand it yes, they are to some extent but not always noticeable. Again it is a matter of supporting its investment to advertise these technological advancements”.

Engineers, in general, have a strong affinity for their own technology. F1 technology is overwhelmed with British race engineers and 017 (UK, F1 team engineer) offered his view that F1 is capable of producing anything: “The thing with F1 is everything. It’s based on finances but it is what F1 produces. F1 can basically develop anything. It has dynamic resources. If the finances are there, then F1 can develop anything. It comes down to finding an answer”.

This is a unique attitude that starts from the mechanical end. Although university studies have increasingly become part of a F1 race engineer’s resume, his experience is typical of the last generation, “For me, I left school at a young age. I left school at 15 and became a mechanic. But those days are over. It was back in the 80s. I did the work and found my way up until I set up myself in the business”.

015 (UK, F1 team engineer), who worked with 017 in their formative years weighed in: “In my particular instance, picking up the phone and calling the number listed for Tyrrell Racing and lo and behold I was speaking with Ken Tyrrell who was in the main office and decided to pick up the phone. I said I would like a job as I had just finished at Ralt, finishing off the design for an upgrade to the RT4 rear suspension. I came in a few days later, was interviewed and given a job. Later I went onto the travel team as an engineer. So I guess my answer is happenstance, being at the right place at the right time. Now prior to this I had spent a number of years in lower formula engineering cars, and in fact started out designing race engines. Anyway, opportunities abound though, and Formula One can be a grind, so eventually you look and land someplace else”.

015 is now employed in Detroit with a major automobile manufacturer and could give a different perspective. He distinguished a new era of university trained engineers, "I would probably say yes [to academic infusion into the sport], as many engineers are straight out of college with very spectacular college degrees, but with little or no practical racing experience as it were in the trenches of other formulas. For example, a good CFD engineer does not necessarily need to have spent time on a prior race team if he is recognized as a gifted engineer". Design is the exceptional area with a low supply of rare inventors, "There is a growing trend that designers are coming from aerospace".

A more recent phenomenon is colleges offering race engineering as an academic major. There are also small colleges established for the sole purpose of teaching race engineering. All of these colleges are located in the UK, where most WFOC teams and the motorsports cottage industry is based. This research identified six such institutions of higher learning. It is likely there will be more in the future.

Computerization has taken over the mundane approach of just a few decades ago, "A laptop. At the moment a laptop tells you the answers". Once on a circuit, its principal objective is different, "Principally as a driver's aid," 012 (UK, F1 team engineer) added to this research.

015 believes F1's biggest historical contribution into the consumer market is brake systems, "Disc brakes turned into carbon brakes," and aerospace is the best example of technological cooperation between an industry and the sport, "The aircraft industry and its relationship with aerodynamics in F1," was his categorical reply. "F1 draws out of the aircraft industry. F1 is able to accelerate everything to get the right answer". It also has the capacity to reverse that concourse and capture what others can offer it. "Yes it goes back to that". Much like his American counterpart, 011, he finds KERS the latest most important technological advancement, "KERS. Williams has done a great job on this." A major proponent of KERS, he sees significant consumer market potential in it.

Physical properties are also of significance in the strength and weight of metals found in motors, gearboxes and suspensions. 015 said, "It's more of the different grades of the metals. Just different levels like more of grades of aluminium". However, his first example of what has accelerated out of Formula

One to the consumer market was not a metal: “Carbon fibre. It followed glass fibre. Now it can be found everywhere.”

Due to logistics, 017 (UK, F1 team engineer) still places the majority of F1 technology as coming from England: “Still in the UK. I don’t want to sound too one-sided for the UK, but it is easy to get stuff made anywhere in the UK. There are many shops to do the same thing. One can move from shop to shop to get the same things done. Germany for sure and France still has a fair amount too”. He dismissed North America but is holding out on the potential of the Haas operation to begin operation in the US.

Technology is a major component that makes F1 sophisticated. 017 said, “It all depends on how you interpret it. You can say it’s more sophisticated because more money is spent. You can say it is because of the materials too. It’s how you can compare it, too”. Money is essential to develop technology so we asked *In what area is money spent to accelerate the technology?* He replied, “Airflow. The shapes of the cars are sophisticated. The electronics are sophisticated”. It becomes clear that lack of money can cause restrictions; so where would F1 be without restrictions? “Endless. F1 can go anywhere without restrictions with money”.

017 was practical in his analysis that Formula One is a good place to test automotive technology because he envisioned mutual benefits with the consumer industry, “Or maybe the other way around too. Things develop quickly in F1. Yes, it’s a good place to test technology that can be used in road cars. Look at Audi. They use Le Mans to develop technology to develop its road cars to good effect”. This indicates it is a good area for teams to allocate monies to with support from manufacturers: “If they keep doing it then I’d say yes. If not, they leave. Plenty have left”.

CFD is an acronym for Computational Fluid Dynamics, a model to solve and analyse fluid flow using computers. Its first conceptual application was at the Los Alamos National Laboratory, and later its first three-dimensional model was published at Douglas Aircraft; thus an American idea realized.

Formula One commands the most advanced technologies and it is decisively different to define. 015 (UK, F1 team engineer) believes it is based first

on engineering: “The maximum use of the energy available to propel a vehicle to get it to go faster or further than another vehicle, whether that be KERS devices, aerodynamics, properties of fuels, and suspension kinematics which is typically rolling resistance. So total efficiency of the vehicle, in the form of integrated systems.”

It is perhaps even more unique because it is shared, transferred and sometimes stolen: “Yes both professionally and unprofessionally as in the McLaren Ferrari scandal whereby a disgruntled employee took physical documents and electronic files to another team,” 015 said. “Fortunately this is rare and quickly discovered. However an overall design chief is a much prized commodity who can demand a high price for his services due to the accumulated collective knowledge he retains in his conscious and subconscious cerebral cortex. This is also true to a lesser extent of junior engineers too”.

Transfer of information is both apparent and deceptive, according to 012 (UK, F1 team engineer): “That’s almost a trick question, because the teams and manufacturers are often different. In some cases they may be the same too though. First of all, teams don’t share information. Whatever a team may learn it becomes highly secretive. A team will do whatever it needs to do to protect itself because a team is looking for a competitive advantage to win. So that answers the first part of the question. However, information is transferred all the time but perhaps not the correct way. Teams will steal or cheat information from one to another. This is no secret”.

Stealing of technological knowledge by teams is a growing interest, “Sure [stolen intellectual property exists],” insisted 015. “They look at each other and try to get the ideas of others to fit into their package. You need trained eyes that understand what you are looking at. Mostly aero parts [can be pilfered] because they can be seen. You need to be clever to interpret it. A guy like Adrian Newey can do it. It’s not too easy to figure it out, but it is done by everyone in F1. F1 certainly has had its moments with criminal activities but what goes on is acceptable to some degree”.

Technology espionage does exist, though, as 012 (UK, F1 team engineer) continued, “From the sublime to the ridiculous. I worked with one well-respected F1 chief designer, who had lost his confidence that he could design another race-

winning vehicle after an illustrious career. He copied the race-winning vehicle of the previous year through photographs he had taken of the car with people standing and touching critical components of that car to reference and scale the hand size of the component in question being photographed”.

017 (UK, F1 team engineer) agreed that espionage exists in motor sports, “This is true with things that are more visible to the eye. It is easier to cover up what’s inside a motor or gearbox than say the shape of a wing that is totally exposed for anyone to see. That’s why you see teams covering up their cars with big blankets on the grids. You can’t see what’s inside the motor unless someone tells you what’s inside it or gives you the mapping of what’s going on”. It appears safe to say that spying exists in the WFOC at its highest competitive levels and the recent FIFA World Cup scandals force us to consider whether integrity is not necessarily an exclusive element found in World Sport.

019 (UK, corporate executive) defined the difference in winning as the ‘small things’, “It is how to differentiate the grey areas. It’s the tiny details”. This could indicate a way of cheating, as he further explained, “It’s how the officials interrupt the rules if it is cheating or not. This can vary. It gets confusing because it could change”.

The general consensus is that Formula One is a good place to test technologies for the consumer market but this can be conditional and time sensitive. “Yes and no [it could be a good place to test]. The more esoteric technology that is 5 years away from production maybe, to gain customer awareness maybe. It must be noted that as far as I am aware, no production car or even road super car has pneumatic valve trains, yet they are de rigueur in all F1 engines to achieve the engine rotational speeds, but in road cars are too costly, unreliable over long mileage service intervals, and customer vagaries like engine oil change intervals or climate temp extremes to be viable,” added the engineer. Advertising in America is properly accepted as a true testimonial and F1-tested technology is a popular vehicle based on sales.

Ultimately, 019 confirmed these F1 advancements make it to the consumer marketplace, “Yes as mentioned previously in the area of ceramics. However mostly the technologies in F1 are usually developed in industry first, typically aerospace. What F1 might do is use this technology first before it’s introduced into

road vehicles although primarily developed in the road car industry, because it is less of a risk to use it on a one-off prototype than on a vehicle with 100,000 units where warranty claims would be significant". Furthermore, he said the order goes from the manufacturer to the WFOC and back to the manufacturer for the consumer market, "Basically, yes. It typically can start in the aerospace division of a manufacturer or a company working in its behalf in aerospace".

It is confusing to understand how knowledge can become applicable to the consumer marketplace, but it is intended that way because engineers construct it accordingly. 019 continued: "Some of the knowledge is very esoteric. I remember Ferrari developed a gas to fill tires based on a gas called Freon which allowed a better heat dispersion from the tires through the rims to the atmosphere which allowed better control and of tire temps, handling characteristics, wear, etcetera. But this expensive gas has not made it to the general market for the reasons of cost quite obviously, and of course Freon is very harmful to the atmosphere, which in the small amount used in racing would not be a problem, however millions of cars would be a serious issue". 019's mention of Freon offered a connection to the American marketplace, as it is widely used in refrigerators and air conditioners. "I think Freon was a DuPont product, which would make it American".

Some product transfers are more apparent. "Automobile gearboxes, safety for cars when they crash and fire-resistant materials as well. Not always given the proper credit," noted 019.

A favourite example of transfer is the new Buick line-up in the US which is largely the Opel line-up; essentially American branded copies. Now GM is moving to do the same with a Chevy model. GM's recovery plan now includes keeping its German unit which is Opel and its British unit which is Vauxhall to capitalize on the engineering expertise they offer the parent. 012 (UK, F1 team engineer) likes this type of transfer: "This is good news for its European operations. The underpinnings of a road car will decide if it will be a good handling car. The Europeans certainly have a better idea about road handling than the Americans so this is the kick in the pants GM needs to produce a better car. It needs to do this. This is a very good idea for General Motors".

He was asked how knowledge would be directly reflected into the consumer market and replied, "Materials technology yes, but in road vehicles the emphasis

in recent decades has been in emissions and fuel savings. This is the antithesis of racing doctrines. So this is primarily where racing and production engine diverge, although even in racing, one can't win a race by running out of fuel, however refuelling in F1 races really obviated this need". This underlines significantly how difficult it is for the general public to acknowledge and appreciate the science involved.

This particular expert was one of the most instrumental, and he explained further on what can be going on inside a motor as an example that can give a technological advantage, "First and foremost the ability to move as much mass of air as possible through the engine, which directly relates to the power output. Phenomenal rotational speeds of engines are now common, somewhere in the order of 18,000 rpm with the direct requirement of moving as much air through the cylinders as possible. This then leads to solutions to limiting factors to achieve those aims. One that comes to mind is pneumatic valve springs instead of steel coil valve springs which always had a limiting factor on the RPMs due to valve spring harmonics and failure".

Dissimilar metals were pointed out as a misunderstood art and skilled method in F1. 012 added, "Apart from the usual exotic steel aluminium and titanium, some of the most interesting developments come in the use of high performance plastics such as PEEK materials. However to directly answer the question, it is surface finishing of metals that has recently been a major area of developments such as coated ceramics on all types of metal parts and micro finishing of metals whether they be surface treated and coated or the plain metal parts. Some argue that by the way that some coatings are applied and adhere to the base metals they are in themselves a new type of material in this all important interface of the materials. Again quite often a coated metal requires a whole new technology, say in lubrication, to get these coated parts to perform as required, so knock-on effects are often needed to optimize the results, or even to get any improvement at all".

He expressed that probing the differences in how metals conduct themselves takes place before it is actually introduced on a race circuit. "It happens through research. Certain things cause certain things to occur. We don't know why until we try. Research is trial and error. So we learn and employ what we do learn".

“Prestige, history, public demand, and product sales arguably,” explains why manufacturers participate in Formula One in the opinion of 012. “Some might argue that a direct correlation could be derived from the engineering of F1 cars to production vehicles and the only two examples I can quote are Renault and Honda. Both are different situations but interesting nonetheless”.

He named the Japanese auto manufacturer Honda as an archetype: “Honda returned to racing in a deliberate programme in 1983. This programme was designed to be a specific programme within Honda Corporation to train their brightest engine engineers within the company internally to learn how F1 works and then repopulate the Corporation”. Honda again re-emerged in 2015, after another hiatus, thus making good on his theory.

F1 motor manufacturers originate from various nations, including France, Germany, Italy, and the UK, which introduces the question: *Is there any difference between the various F1 motors?* 012 continued, “Although all engines in Formula 1 have to conform to a strict set of rules, quite a variety of approaches in terms of design and material specifically are adopted, even to the effect of designing the engine characteristics to enhance chassis dynamics or aerodynamics to ultimately provide a faster lap time. Most obvious is weight and package size. The smaller the engine the easier it is to make the aerodynamics work. Also fuelling strategies in recent years have played an important role in keeping the engine spinning, pumping air through it to blow the exhaust air over aerodynamic portions of the car, at corner entry to increase down force thus lap times”. Here it was noted by 011 (USA, FIA executive) that the Cosworth motor, an engine synonymous with all F1 motors several decades ago, was originally funded by the American carmaker Ford, thus the name Cosworth/Ford.

“Some motors may find a slight amount of more horsepower,” said 019 (UK, corporate executive) explaining why some motors in F1 go faster than others. Indy Car motors, designed for high speed ovals, have a higher top speed, with F1 motors being smaller but more sophisticated. “Basically, the same technology but F1 is different because of the cost. F1 is not the same because it will spend more money to find a little extra out of the motor”.

The speciality area of 012 (UK, F1 team engineer) is motors, and he described what can be going on inside a motor that can give a technological

advantage: “Remember all of the motors are different in their finite form but still fundamentally the same. They all have to play by the same set of rules and circumstances. A new metal compound, a piece of rubber, a small turn can make a difference. It’s highly complicated but you can see this human input is the genius to bring about this propulsion”. The research further asked if by propulsion he meant technological advancements: “The impetus to get there is the genius of man.”

He also mentioned the influence and consequences of metals: “With a race motor the whole idea is to make it go faster. This can be accomplished by making it as light as possible, to be able to withstand heat, and for it not to break in doing this”.

Based on performance alone, one would suspect there is a major difference in F1 motor manufacturers. Identification of differences causing unequal efficiencies is crucial to the international linkage with technical research. “For example HP when sponsoring the Williams F1 team some years ago provided 50 or so high level powerful computers to the team which access a super computer running complex CFD, the computational fluid dynamics math modelling of aero flows in and around the car”. HP is Hewitt-Packard, a California-based company.

As previously mentioned, carbon fibre is an American invention that was most often named as the best example of technology by experts including 002 (USA, SCCA executive), 007 (USA, journalist), 010 (MEX, Indy-car driver and F1 manager), 016 (ITA, F1 team engineer), 018 (BEL, F1 driver), 020 (MEX, FIA executive) and 021 (USA, journalist). 015 (UK, F1 team engineer) also agreed: “Yes the first use of carbon fibre chassis structures to build lighter but stronger vehicles. John Barnard whilst at McLaren approached Hercules Corporation in the USA to make the very first carbon fibre tub, the McLaren MP/4 or a chassis as you call it. They are now compulsory in F1 and most other high end motorsports”. This comment is exceptional because it is in total accord with what 011 (USA, FIA executive) said earlier in this chapter, underscoring America’s biggest contribution to industry in general and F1 in particular.

As a best product and a product that can be transferred into the global market, 019 (UK, corporate executive) placed carbon fibre as the elite example,

“Carbon fibre. Its general use in the world makes it to the top of the list. Then carbon brakes”.

While computers were ‘probably’ an American product of creative imagination, they are now considered a global technology. Computers are used extensively in F1 by multiple departments. 019 said, “In short, the six areas that spring to mind are communication, control of systems, driver aids, measurements, CAD, and CAE. The first person to seriously use computers was Dr Karl Kampf at Tyrrell, I believe, whereby he instrumented a vehicle to accurately measure what displacements, loads, etc., were acting on the vehicle”.

The utter importance of computers in F1 was unmistakably pointed out by 019: “Essentially nothing would work or run in F1 without them”. He also connected computer use directly with aerodynamics, “Every aspect of design. Computers analyse data involving all aero”.

The best general definition of computer use was provided by 012 (UK, F1 team engineer). “Mapping the car, the gearbox, the chassis and its suspension. This is all done in the shop or the headquarters. At the track we map the race plan and the way the race is going by computer”.

This research recognized no less than seven trans-national computer companies that have participated in the WFOC in the past decade, representing five nations. Hewlett-Packard and Dell are both American companies with past relationships. Lenovo, a Chinese firm, the result of a merger with the American company IBM, remains an active partner.

CAE (Computer-Aided Engineering) is specific engineering software, of which much has American origins. As an engineer, 012 was able to tell this research what this application is and means to Formula One: “The use of stereo lithography to make physical components directly from a series of binary code in a computer algorithm on the designer’s screen. This cut a lot out of prototype mechanics and technicians having to expend human energy to make parts. Computational Fluid Dynamics or CFD is the computer math modelling of complex airflows around and even through a vehicle like radiators for example to reduce time in physically testing in wind tunnels or on track. However CFD is still not a substitute for real-world testing”.

He remarked on how the use of computers transcends Formula One as an industry and North America as an isolated continent, "With communication [the way computers are used] in a number of ways. For example in the press room and TV feeds to the world but also to communicate with the driver what is going on with the vehicle. However more important are the passive systems whereby a vehicle on the track is transmitting all sorts of data on temperature, vibration, speed, revs, forces, etc., directly back to the engineers not only on the pit wall but to engineers at the home base sometimes half way around the world via satellite linkups. The engineers can then adjust and develop strategies to provide the drivers with the most optimal race car on the track".

Computer software and other technology service companies have deeply entrenched themselves in the WFOC as both sponsors and suppliers. Accenture, Boeing, Digipen, EMC, Intel, I-Rise, Kaspersky, Net App, SAP, Symantec, and 3D Systems are all American firms with an active history with the FOG, various teams or organizers. The American headquarters of global corporation Siemens, British-American concern CD-Adapco, and the Canadian company Processia Solutions are also currently involved.

The research reiterated the question on how this relates to F1 and the motor again loomed. 012 said, "With control systems, the engine is controlled by a computer that is many hundreds of times more powerful than the computer that helped land the man on the Moon in the Eagle Moon landing device".

The term driver aids in racing and, more recently, in street cars is increasing in usage, so the research asked 015 (UK, F1 team engineer) about them. "Driver aids are interesting, although driver aids are specifically banned in their more overt forms as in traction control. One could argue that being able to soften the engine map due to circumstances on the track due to varying conditions might be beneficial. For example, in a wet portion of the race, it might suit some drivers' style to not to have such a harsh aggressive engine map bringing in the power so abruptly, causing wheel spin". 015 mentioned data measurements and was asked to explain. "Data and more data. The engineer's wet dream. With all the systems on board, a steady stream of data or measurements relative to a known condition are fed off the vehicle for storage and analysed either in real time or crunched later".

5.5.3 Energy and Design

KERS (Kinetic Energy Recovery System) is a more recent technology. It basically stores and reuses energy. 015 (UK, F1 team engineer) called it one of the industry's favourite 'new' technologies: "Yes, any KERS system is a favourite technology. I believe total energy use in movement of people, produce and goods, whether that is turbo-charging using waste exhaust energy, to thermal exhaust heat recovery systems, to shock absorber energy recovery systems. The amount of energy per gallon/litre of gasoline is usually the most-often quoted figure. It is usually a rule of thumb quoted that a reciprocating piston engine is about 30% to 35% thermally efficient in converting that energy into useful work, turning the crankshaft, which drops to about 25% when released to the wheels through losses to the transmission. For a diesel it is about 40% to 42% percent efficiency, with the same 3% to 5% transmission losses. The remaining losses are dissipated in the radiators, 60% to 65%, and any other cooling, heat, which are a necessity due to the inefficient Otto cycle. Radiators on a race car or any vehicle with trains are an anathema and scream inefficiency. So if you are only getting 30% of efficient thermal use from the fuel, why not recover as much back from the 30% to help you, in the racing scenario, go faster, and, in the road use scenario, use less fuel for the same mileage. Using the fuel as efficiently as possible is the most responsible way to use a finite global resource. Turbines are the way to go as in the Patriot Project I have re-constituted. Turbines don't have radiators". The Patriot Project is conducted by Chrysler in Detroit, Michigan. Chrysler is owned by the Italian consortium Fiat.

A relevant question at this point is: *Can any of this, KERS or turbines, be transferred to everyday consumer use?* "Yes, of course. That is exactly what we are ultimately striving for here," added 015.

There are many elements to F1 technology and the research asked what may be missing in this evaluation, "Aerodynamics", said 012 (UK, F1 team engineer). "The shape of the car's shell, the airstream it makes, is relevant to the speeds it achieves as much as the engine in some ways. It's not just the top of the car either but under the car as well". And, as discussed, much of global aerodynamics originates in America.

As a technology, not a technological product, 019 (UK, corporate executive) likes aerodynamics best because he believes it to be the cutting edge: "Aero. It decides what's possible and what's allowed. Aerodynamics gives the biggest payback to the teams. It's the biggest investment". And he clearly gave his reasoning, "Aerodynamics is a compromise between straights and curves to produce optimum speed. It decides how fast a F1 car can go. The wings and bodywork is a profile to reduce drag and create down force. It's super-complex". He placed it as the number one technology: "After aero, then we have transmissions and rear suspensions. F1 is the pinnacle of racing. Its technology is supreme". Technology, not as a product, will be discussed further in the next section.

To the chagrin of some, the WFOC is not open to all technologies, and in some instances, it seems to be adopting more spec technologies. Tires, in particular, are one category in use as a spec requirement. In the exercise to lower costs at one time or another, fuel cells, gearboxes, and electronic management systems have all resorted to an integrated spec design, causing the research to ask if spec technology is a positive thing. 015 (UK, F1 team engineer) had multitudinous thoughts on spec technology. "The spec technologies shared by teams revolve around materials. Carbon composites, weight, weave and resin matrix media come to mind, along with oils and fuels specifically. Now, I think that it is fair to say that with different engine suppliers to various teams, that for argument's sake are Mercedes and Ferrari, and then the fuels and oils formulated for their specific use by their partner companies like Shell and Exxon are also supplied to the teams using the same engines. The fuel tanks are usually bespoke to each team as this revolves around the aero package as that is the dominant design criteria. So the width/height ratio is driven by each car's aero design. Now, with designers moving from team to team to team, one could argue that they have their own preferences, so I am sure that the tank design in the McLaren when Adrian Newey was there bears a remarkable resemblance to the Red Bull design now, as they like to keep things that work, for obvious reasons. Internally each designer usually has his own design of weirs, traps, pumps and more, but also the engine manufacturer also feeds into the tank design. Brakes are some components that are common but how the air is fed to those components again is a function of

the total aero design package. If one get down to the nitty-gritty of them, ball joints, etc., can be common from a preferred manufacturer catalogue, but with slightly different sizing due to angle capability, loadings etc. Safety equipment is where I guess most commonality lies. Fire-proof materials, head restraint crush materials in the cockpit area, HANS devices are mandatory and seat belt type and material are common between a lot of F1 teams. Don't forget on the safety side a lot of this is regulated and mandatory dictated by the FIA, with research and recommendations done by the F1 teams themselves for adoption by all. This is where the most collaboration occurs. The FIA or FOM might ask Williams, for example, to do a piece of research. It will then publish the results and all the teams will then adopt those findings and implement them to their own design. Gearboxes were always free as far as I am aware, with the ubiquitous Hewland FG and its internals used, then each team later used to use all the same internals and design their own casing for wing mounts and suspension points etc. Now most teams design all the parts including gears themselves. Ever seen hollow gears? F1 has them, two halves of a gear, laser welded together, hollow in the centre and then ground to the profile. X-trac makes the best. Ferrari as far as I am aware has always made their own gearboxes, and the only time I could think of was when they didn't was when John Barnard, based out of England, was their chief designer". Reducing or controlling costs based on the availability of suppliers were not mentioned here, which is probably the intention of the WFOC administration and the FIA.

To bring about a close to this matter, the research sought to learn the advantages of international linkage with technical research, and 015 surmised, "There are some but not too many I would say. I know that F1 teams are very appreciative of International access to corporations' research materials and components. However by the very nature of F1 they tend to be very secretive, preferring to preserve the technical advantages they may accrue from a corporation by the very nature of being in competition with every other team. Therefore most often the technical feedback is very one-way, except in the case of safety, I guess. The FIA is a much more reciprocal organization in regard to technology, but again that is usually focused around safety".

The WFOC has the advantage of using both proven global corporate technology and its own research and development in technology. This impels the question of preference by the competitors, “F1 does like unproven technology and tries to exploit it. However due to the very nature of the aggressive environment that technology must live in like a Formula 1 car then deficiencies are fast uncovered,” concluded 015.

We asked: *What makes the difference to produce a winner?* “Who works better 24/7,” thought 019 (UK, corporate executive), indicating that research and development creates and perfects technology. The WFOC is officiated by rules and regulations that can hinder technology, “Too many [rules] to make sense like not to curb the car from going faster without sacrificing safety”.

Technology is expensive and the final determination is the monies allocated to technology by the teams, manufacturers, and others as a cost-effective strategy. 015 (UK, F1 team engineer) surprised by saying, “I would have to say no, not really. Extracting the last given drop of performance from an existing technology is where F1 benefits lie, which is really a development function within the broader sense of the automotive world”. This indicates something very contrary to the commitment and is disputed by others found in this research. What he did defend is that technology is important in America, for America, and for the global economy.

5.6 WFOC Technology’s Inter-Connectedness with North America

At this juncture, the research attempted to identify what WFOC technologies directly inter-connect with North America. It was determined that the best method was to examine this aspect through nationalistic observations.

Baldwin and Gorecki (1998) believe the ability to measure and take advantage of the dynamics of global competition have pushed Canada and the US past other nations in the race to develop new technologies faster and often better. As is the objective of this research, we come to learn that many of these technologies work their way into the WFOC.

5.6.1 Technologies Transforming into Technological Products

Carbon fibre has already been named as a best technological product transferred into the consumer marketplace and 008 (USA, television), agreed, indicating its North American inter-connectedness: “Carbon fibre by the Hercules Company in California is responsible for carbon fibre’s mere existence. It’s too bad the US Formula One team based in Charlotte [not the Haas team but the USF1 team] did not work out because they were working on lots of new technologies not presently in F1. That was going to be different”.

While carbon fibre is currently of the moment, 011 (USA, FIA executive) pointed out that technologies and materials have a life span, “Carbon fibre is great. But someday it will be passé. Just like fibreglass is now passé. Carbon fibre has had a huge effect on the airplane industry and this is something it shares with Formula One. All good things are eventually extinguished. At one time aluminium was very high-tech and expensive metal. Today aluminium is just another metal”.

He pointed out other advanced materials: “Kevlar. It’s not the same as carbon. Kevlar is a fabric that is fire-resistant. It’s a glass fabric. I believe Kevlar is a DuPont product. DuPont is out of New Jersey. It is very strong and used in tires as well. It handles heat very well”.

Kevlar was invented by a female Polish-American chemist. Today, it continues to be used in racing but also has numerous other unrelated usages: automobile, tires, bicycle tires, motorcycle clothing, musical drum equipment, sport shoes, and military applications like aircraft pilot helmets and on board naval aircraft carriers. 008 (USA, television) added American engineering is ready to introduce some new technologies to the WFOC, “Electronics for starters”.

NASA and space are undoubtedly the most technologically advanced industry in the world and lends itself to F1, “F1 has borrowed tremendously from NASA-developed products,” said 003 (USA, journalist). He spoke confidently of American inter-connectedness, “There are many US technologies that have been introduced into F1 and then refined internally by F1 teams. What is of more importance are F1 technologies finding their way into the world markets”.

Telecommunications is an area of massive support in F1. Tele companies like Alice, Orange, Tele-Italia, T-Mobile, Telefonica, Vodaphone, and AT&T

have all been technical suppliers to various WFOC teams during the past decade. Their aim is to gain commercial exposure from the technical connection. One of those suppliers is American giant AT&T, and 011 (USA, FIA executive) justified their interest: “Well, it must work for them in some way. We think of them as an American company but they have a presence globally really. For some reason telephone companies seem to like Formula One”.

011 concluded at this point that the WFOC is lacking something and some answers can be found in North America, “I think one thing is the needing of income from the sport itself. Look at youth hockey. It’s a wonderful system where the big leagues give back to the youth leagues. It gives back to the first levels. Formula One needs to reinvest. Formula One needs to reinvest into North America. Things like college football can support itself but Formula One needs to find out what it should do. It needs to go back to karting. It needs to be part of everyday life”.

023 (USA, corporate executive) was confident and clear that ultimately, in his area of expertise, most technology originates in the US, “It [the idea] started through our UK headquarters and things often run through there but the credit for this effort eventually goes to the American locations because that’s where most of our technology evolves from”.

Competition does exist, especially in the discipline of electronics, said 031 (USA, corporate executive), a former president of the electronics division of a Fortune 500 company once involved in the WFOC. “Electronics are a huge contribution and there is stiff competition in electronics from Germany and Japan. I think aerospace has the biggest influence, though. The shapes and composites used from aerospace come from the States and I think you can find some type of association between Formula One and some American companies there”.

Fuel cells are a highly specific item, and most are designed and manufactured in the US. 025 (USA, corporate executive) explained his company’s connectedness, “All of our research and most of our production is done at our main factory [in the US]. Some of our low-volume specialty cells are sometimes produced in England for things over there”.

The American helmet manufacturer Bell is the largest and leading supplier of head protection in F1 and also produces helmets for motorcycling, bicycles, and other related recreation. 013 (USA, corporate executive), said this about transfer and connectedness, “The helmets were when I worked at Bell all made in Rantoul, Illinois, but I believe they may be made both here and other places now. I am not sure with the European entity taking over the US entity at this point. I am not sure about other products either”. The Bell factory in the US continues to manufacturer all of its auto racing helmets. Other Bell products are produced elsewhere, including bicycle helmets now made in Asia. In F1 though, it heavily publicizes its American manufacturing base as a positive selling point. “I can assure you the helmets made at the Rantoul (Illinois USA) factory are all top notch,” he added. “Nobody makes a better helmet and that’s why the world’s top drivers insisted on a Bell helmet. That’s literally the truth. These drivers wanted an American-made helmet because research technology and construction was never compromised”. Other helmets made to international standards used in the WFOC are made in Italy and Japan.

Rubber and tires are one evolving industry and technology that ‘makes a difference’. The Firestone Tire and Rubber Company competed in Formula One for 25 years, when there was stiff competition from other tire companies, from 1950 through 1975, winning four Driver’s Championships and three Constructor’s Championships. The Goodyear Tire and Rubber Company competed in Formula One for 39 years, from 1959 through 1998, winning 24 Driver’s Championships and 26 Constructor’s Championships. Both Firestone and Goodyear are American companies. Firestone is now owned by Bridgestone. An heir to the Firestone family, 005 (USA, corporate executive), said, “Considering my family, emotionally, I’d like to say something about Firestone’s racing legacy in Formula One. We have a long history in Formula One and were one of the original tires used, but I’d have to say carbon fibre because it is so strong and indestructible. I remember when Schumacher crashed out in the British Grand Prix and got away with just a broken leg. I said to myself that the carbon fibre tub saved his ass”.

It was not difficult for him to locate American consumer product participation in F1. “I immediately think of Budweiser and Hewett-Packard, although their logos are very small on the cars they sponsor,” said 005. “IBM is represented with its

Lenovo brand. Computers have found its spot in Formula One”. He named a little-known art called traction control as an American technological contribution: “Formula One is very self-contained. They can do what they want. They are very good that way in coming up with new ideas. One of the biggest contributions Formula One sent over to North America is traction control. Most Americans don’t know that because they do not care or think that way. All these new age gearboxes and transmissions are originated in F1 too and are found in the consumer car market”. Nonetheless, he does not see that populations in Asia and Europe appreciate and understand the monies spent by North American trans-national corporations in the WFOC? “No. Not really. F1 is F1. Like I said, F1 is a business. It’s all about power, politics and money. Nobody gets credit because it’s a power struggle from within. The sponsoring companies must fetch their own to get anything out of it”.

An engineer, 023 (USA, corporate executive), scored CAD (Computer Aided Design) as an American technology in Formula One that does not get noticed: “Designs and materials that make the cars go faster because of airflow and weight. And this can all take place because of the computers and their software. CAD may very well be the most dominant single technology in F1 because it is used by virtually every team. This is exactly what we provide”. CAD is an acronym for Computer Aided Design which is the use of computers and software to analyse, create and/or modify designs, and was first employed by several American corporations. The 2D and 3D applications used in the WFOC were invented by an American and perfected by other American entities, creating an important presence of connectivity.

British observations of North American connectedness are integral because the industry is heavily populated by Britons and those from its commonwealth. It is general practice to contact the public relations department to learn anything about a company and journalists to learn the insights of a story or target. 004 (UK, journalist) was asked about American corporate existence in the WFOC and he replied, “Obviously there are scores of these companies and many of them are American companies. Right now this is what makes America a player in Formula One. But they do this for global reasons”. He confirmed what has emerged: 1) American technological suppliers exist in the WFOC, and 2) this is widely not

known outside its fraternity. “There has always been this entrenchment of American supplies from manufacturers into Formula One. And it has never diminished. Most people have no clue about this. Simple things like brake callipers for example. Tires are a big supplier from the not-so-distant past. Computer technology is another. Safety things too are mostly American ideas. It can go on and on”.

Opinions from outside North America and especially the US are important to eliminate bias. 012 (UK, F1 team engineer) validated further, “Certainly America plays a role in F1 technology. It is probably not accounted for because there is no American car or driver, but America can take credit for some exotic gains in the sport”. One must differentiate between what is the most important technology contributed and what is personally a favourite, “The composites used originated in America first. The one I like most is the HANS device. This is a safety feature used by drivers to protect their necks from severe whiplash when they shunt”.

It can be difficult to see where exactly the connectedness lies, as 019 (UK, corporate executive) attested, “There must be. Way down the line. Materials often start as American. They originate in the space stuff with NASA”.

017 (UK, F1 team engineer) could ratify a general American involvement but replied with boundaries, “Yes, also a fair amount [of American technology in F1]. It is rather restrictive to say what. I’d say engine parts and electronics,” and conditionally, “Fairly important but if they went away it would not be a huge loss. There is plenty of technology out there from other places to make it up”.

The research asked 015 (UK, F1 team engineer) where the technology in Formula One comes from globally, and this expert responded, “Aerospace for 85% of it, and typically US aerospace, meaning the various space agencies as a rule. NASA is a goldmine of technology for F1”. This is interesting because most aerospace technology knowingly comes from the US, so the research queried further about other American technology: “Yes. Boeing, Lockheed, and quite a few others on the US side play a gigantic role in F1, as does BAE and Airbus on the European side. Most F1 cars are designed on CATIA V5, which is a Dassault CAD system developed for Airbus. If one goes back to the Transistor micro-processor NPN chip then that was discovered in the Bell Labs, AT&T really. So it is American as well”. Dassault Systemes, a French aerospace company with

a sales force in North America, was a major technical partner with the now-defunct Toyota Formula One team. Interestingly, this AT&T mention echoes what 011 (USA, FIA executive) said earlier in this section.

015 also furthered the cause of rubber and tire significance: “Another example that comes to mind would be radial ply tire technology that was developed for the road and then showed up in F1 when Goodyear and Michelin were protagonists. What it did was spur a recalcitrant Goodyear to move away from bias ply and old cross ply tires for production cars rapidly after they could not compete with Michelin on the F1 track with their radial ply technology, a huge expense for Goodyear as machines that make millions of cross ply tires were now obsolete, and it very nearly brought Goodyear down, as corporate raider Sir James Goldsmith, who was watching the developments in the F1 tire battle, saw the weakened financial state of Goodyear and waited long enough to let Goodyear to catch up as best they could on radial technology and then tried to take over the company, or at least pay him again many millions to go away. Which was his original two-pronged strategy all along, was to either buy the company and sell or be paid to go away, which was another burden that they still have not fully recovered from. So I guess in the case of Goodyear the corporate CEO, CFO, CTO, and board at the time being asleep at the switch seeing what Michelin across the other side of the pond were doing. A salutary lesson which I don't think still has been learnt by US industry, where corporate pay is not linked to performance at all. The US corporate board structure and the chummy, fat, dumb and happy club is a death knell for US industry”.

His conclusion was clear cut, “America is a major contributor. It is very obvious in my opinion but I am part of it or have been so I know very well. We have supported that during our talk here”.

Judgements are not limited to the American and British, Mexican 014 (MEX, OMDAI executive) is fully aware and understands American complicity: “From wind tunnels used by F1 teams like Lockheed Martin in Georgia to on-board camera technology for television to name a few of the advancements of the US to F1. I sense for America this means a smart way to create an impact and make it a great event. The cameras in the cars are referred to as a sign of US technologies in F1 so that an average person in Mexico interested in the sport can surely relate to it”.

029 (MEX, television) can identify with American products, thus their F1 connectivity: “Mexicans love American products, as most American companies do sell in Mexico. Almost any brand is known. Household products like detergents, foods like McDonalds or KFC, General Motors, Ford, American Airlines, Wal-Mart. Everything American can be found in Mexico. And Mexico supplies America as well”.

018 (BEL, F1 driver) gave a concise, not prejudiced, comment to sum up the question of connectivity: “There is plenty of American technology in F1 and more is welcome to make it better because it is usually better than everyone else”. This is the most conclusive endorsement of the theory on connectedness, transfer and the product as a whole.

5.7 Summary and Conclusions

This particular chapter offers more observed content than the other two empirical chapters because its stage is very large. The size of its many subject matters assembled a mammoth amount of information and inquiries relevant to the title and key to the foundation of the research’s theory.

Commercialism and technology are the two most innovative parts of the research and allowed it to acquire knowledge direct from subjects who are acutely aware of its composition. In this summary, the compiled information is used to determine an observed and palpable conclusion. Technology was treated as part of commercialism in this thesis.

To refresh, the ultimate objective of commercial involvement in the WFOC centres around sales, which is generated by marketing programmes including a) advertising, corporate entertainment, c) media coverage, i.e., publications and television, d) merchandising, and e) trade when available. Trade often includes, but is not limited to, the exchange of technical knowledge that can be beneficial to a corporation and a participant.

Commercialism, per se, is directly connected to: a) consumer products, b) acquired knowledge, c) technology, or d) any combination of the three. Technology-related commercialism and other automotive-related products outweigh all other pure commercialized branding in the WFOC. In consideration of

its mass global appeal, there is a general consensus that the WFOC is a powerful marketing tool and has the ability to 'sell' any name or product globally.

Corporate name recognition and product branding are the two most prominent rationales why a corporation would become involved in a commercialized WFOC programme. This type of commercial endeavour, like any in the WFOC, is highly expensive and mostly considered as an accessory form of marketing typically enjoyed when generated profits reach or surpass objectives.

Trade is an inexpensive entry into the commercialized world of the WFOC; however it is limited to companies where a product is in demand by the administration, drivers, promoters, or teams (participants).

There is minimal evidence of awareness, globally or on its own continent, of any North American corporate involvement and linkage in the WFOC at any level, with some exceptions. Under specific conditions, Mexican commercialism prospers greatly within its own boundaries when there a Mexican driver in the WFOC or a Mexican Grand Prix. Interest drops without one or both. Multi-cultural Canada is a strong marketplace for targeted commercialism utilizing the WFOC, particularly in French Canada where there is significantly more support than in western Canada. In the US, the WFOC is considered more of a clique or fringe sport. The WFOC and commercialized products in the US face intense competition from other forms of motorsport, the major league sports, and other sports and special events; this limits its appeal and effectiveness. The US represents a large geographical area with multiple domestic cultural differences that makes it difficult to penetrate as a single nation. Regardless, there is significant American commercialized support in the WFOC, built largely around its trans-national businesses. There is agreement that the WFOC has a need to discover how to market its product better in the US to foster greater commercial growth.

WFOC technology is perhaps the most advanced form of this kind of discipline found in any sport. It has the remarkable ability to transfer certain knowledge that can be advantageous to the consumer market. A common definition for technology in Formula One implies the ability to accomplish any challenge by research and development.

Technology is a by-product of corporate development and, although it is its own separate sector, is used often for commercial purposes. There are two types of essential technology in the WFOC: a) dedicated and b) partnerships.

Dedicated technology is referred to as the 'pure' technology applied for the exclusive purpose of the race team. The obvious dedicated technological links are a) the team itself and b) the manufacturers of automobiles, including re-badge branding to create a visual link between the team and manufacturer.

Partnership technology refers to the technology that is transferred to the race team from another source for mutual development. The partnership technology most named is the aerospace industry. Aerospace encompasses a) design and b) space-age materials. This is consequential to this research because aerospace is dominated by American corporations.

Computers and related software are consistently named as an integral technology found in Formula One after aerospace. Numerous other technologies that are researched developed and perfected in Formula One including brakes, fire retardant materials, fuel cells, head protection (helmets), suspensions, tires, and transmissions were also named. KERS was called the 'newest' technology or the technology of the future by several experts.

There is an abundance of American technology found in Formula One; yet it is not common knowledge to the casual race fan and even some involved in the sport. There is no indication of transferred technology from Canada or Mexico (only one Canadian software company was found).

It has been concluded that there is a strong corroboration of prodigality of North American commercial and technical involvement in the WFOC, which is mostly from the US, but it is often difficult to visualize and understand because efforts to market do not always target itself.

Chapter 6: The Role of Culture and National Identity in the Globalization of the WFOC

This chapter identifies the cultures found in the WFOC and its roles that are an essential ingredient in its globalization. Empirical data collected in this section provides quantitative research to complement other qualitative theory to define the culture, national identity, and patriotism found globally in the WFOC.

6.1 Culture and the WFOC

It is a safe assumption that culture and national identity are the most explosive matters contemplated in the WFOC. Schoenberger (1997) points out that time, space, and competition are the structural conditions that are part of a capitalist society. The entire framework of the WFOC is capitalistic: the administration, teams, sponsors, promoters, and even governments comply with this ideology. “Transformations in competitive regimes are akin to spatio-temporal transformations in that they are changes in qualities of social life that are normally seen to be natural and enduring features of the human environment. Time passes, space is, and *Homo economics*, like all species, competes for survival. They pervasively affect our lives, but we have no control over them as individuals. At the least, this naturalization makes it difficult to discern what is at stake in competitive and spatio-temporal transformations and to strategize about them” (Schoenberger 1997). What becomes evident is the eventual application of this to the World Formula One Championship culture we are about to precisely define.

One reason sport culture is so powerful is because, “Sport celebrates basic human values of freedom, justice and courage,” according to Jennifer Hargreaves (1982). It would seem that the personalities in the WFOC are some of the most globally influential in this regard because culture and national identity is the very vehicle to celebrate in this instance (Hargreaves 1982: 6).

Carlos Slim, perhaps arguably the wealthiest man in the world, is behind the resurgence of a Mexican Grand Prix announced for the 2015 season. He emphasized that ways of life necessitate an attachment. In late 2014, at a news conference announcing Mexico’s slot in the championship, he professed his

knowledge of the essential passion in the sport, “It’s a stable country by and large, our economy is doing quite well and we have drivers people can identify with”. Slim was indicating that WFOC culture in places like Mexico requires a connection, and that the relationship is between its people and its race drivers, of which there are two at the moment (Autosport 2013a).

Tomlinson and Young (2006) ask in regard to a spectacle like the WFOC, “To which culture does ‘game’ or ‘ritual’ properly belong?” This research took it upon itself not only to discover WFOC culture but to identify the exact cultural composite found in North America through two comprehensive questionnaires conducted in respective WFOC territories. The results can be found later in this chapter. It is apparent that culture in the WFOC, like ethnic situations and lifestyles elsewhere, connects through the mediums available.

Today’s WFOC agrees with Macquire’s description of cultural composition and progression, “The popular appeal of sport increased significantly during the course of the twentieth century, becoming truly worldwide in scope and intensity with the growth of international sporting bodies, competition, tournaments, migratory flows of competitors and associated global extensive forms of media representation, especially in the form of terrestrial (later satellite) television and the Internet” (Macquire 1999, cited in Smart 2009: 113-114).

6.2 The Culture of the WFOC as a Global Culture

The researcher determined that the foremost way to address WFOC culture was a systematic approach arranged by national identity. The first group of reports came from those from the US. The obvious question asked of 011 (USA, FIA executive), was: *What is World Formula One Championship culture?* which netted an immediate reply, “The best example that comes to mind is the ‘tifosi’. It is but it’s not necessarily Italian. It’s really just a very important part of Formula One that can be found anywhere on the circuit”. The ‘tifosi’ are the hard-core Ferrari fans, as he explained, “It’s this very energetic group of Ferrari supporters that can be found anywhere in the world”. Any example of this type of culture must be comprised of characteristics and he singled out the teams: “Formula One is blessed to be a brilliant brand. It is well developed and has a positive balance. Its strength is its core of teams. The teams in Formula One account for its worldwide

acceptance because of the continuity and their ability to survive". The argument as to whether this culture can be enjoyed and survive with or without North American rounds remains debatable, "Once North America can solidify its place on the schedule and stay on the schedule it will be very exciting and eventually they will". *What is North American WFOC culture?* "Now it is quite minute. It has had some highs but it is gaining some recognition again with the races in Texas and New Jersey [since cancelled] being on the schedule. There is plenty of room to improve its stature". History has proven that over the years America has had a strong cultural history with teams like Penske, Haas, Gurney's Eagle, Vel's Jones and Shadow, "You can say that. Teams are another part of what culture is in Formula One". He named the first American world champion as its greatest cultural success in F1, "Probably Phil Hill. Phil was the only American-born world champion and he symbolized the American hard work ethic". However, Mario Andretti, also a world champion, is considered a cult hero in American racing and sparked huge national interest: "Mario was successful from the day he started in everything he touched. Formula One in the United States was at its all-time high then". In the end, he stated, it is the fan that determines the culture and North Americans are no exception, "It's the race fan anywhere. But the American Formula One fan is very different from all other places. It's something they are not preoccupied with like it is in other places. Americans and Canadians are different about Formula One. But I can tell you a story about the Japanese baseball team that just won the championship in Tokyo where they simply boarded a bus after the game and went to the hotel and had dinner in the restaurant. Could you imagine the New York Yankees doing that after winning the World Series? Places and acceptance is different everywhere in the world and we are probably more different".

The research asked 031 (USA, corporate executive) if there is a difference between Formula One culture and Formula One nationalism and he answered academically, "My first impression is no, but at a second notion there is a cognitive difference. Culture refers more to the origins, ethnics, or people sharing a common place, whereas nationalism is how they sustain or display support of that". This was followed with his version of Formula One culture in North America, "I am really not sure because it is rather ambiguous. It's not the same as in Europe and it is really not the same in Canada as it is in the United States. And now we have

Mexico again next year. It is there however but it just does not stand out because we really have nothing or nobody to cheer about”.

6.2.1 Ethnic Connectivity

What becomes prominent at this juncture is that Formula One culture is distinctly related to ethnic and cultural connection. 013 (USA, corporate executive) agreed with 011 and 031: “The ethnicity component. The ethnicity or the culture in F1 has always been pretty straightforward. It began as a sport of European gentlemen. European males or males that come from countries that were once founded by or colonies of Caucasian or Hispanic Europeans [participated in F1]. It has not been until very recently that a black, or mixed race driver has raced in Formula One, Lewis Hamilton, the British driver, although an American, Willy T. Ribbs, did test an F1 car back in the 80s”. And he also found some agreement with the existence of Formula One culture in the US: “There was a short article in Vanity Fair last year that addressed the issue of F1 culture better than I can do [see: www.vanityfair.com/culture/2012/11/formula-one-racing-comes-to-america] ___ To most Americans or US citizens I think F1 is a mystery. As a country, our taste in motorsports is far more redneck than other countries, thus NASCAR is the second most watched sport behind NFL in the USA. F1 culture indeed eludes most Americans”. However, he made an effort to separate the US from Canada and Mexico in this regard: “As pointed out in the Vanity Fair article, there is actually very little USA or American culture that can be found in Formula One. In the entire history of the sport, only two Americans have won the F1 championship, Phil Hill and Mario Andretti. There hasn't even been an American driver in F1 since Scott Speed quit in 2007. Canadians and Mexicans, as the other two North American countries, probably have had more F1 drivers over the years than the USA has, though only one Canadian has won the championship and I believe no Mexicans. The public in Mexico and Canada probably better identifies with F1 racing on a percentage basis than do US citizens”.

Alternatively, 003 (USA, journalist) argued F1 culture is fluid, “The culture of Formula One is a constant changing and evolving thing. In some ways it can be defined generationally. From an ‘inside the ball park’ perspective, movies about racing reflect the changes. For example, *Grand Prix* reflected the mid-60s, *Le Mans*

reflected the late 60s, and *Rush* reflects the mid-70s. *Senna* helped define the 90s. In the 60s, the F1 culture was a mixture of ground-breaking, revolutionary technology vehicles driven by ordinary men performing extraordinary feats. In the 70s, the F1 culture was a blend of design and individuality in the vehicles with drivers who were still extraordinary, but not superheroes. In the 80s and part of the 90s, with the introduction of the automotive factories, the F1 culture was teams driven by wretched financial and technological excess and drivers having to tame vehicular 'beasts'. Come the late 90s until now, the F1 culture has changed to a common design platform that fine-tunes its vehicles to the thousandths or tens of thousandths of a second, and drivers who are just common except for some superstars that capture the public's imagination, and the cars look almost identical. Another example of constantly evolving culture is in sailing's America's Cup. The change from when Ted Turner's team won, where the maximum speed was perhaps 15 knots, is replaced by a carbon fibre catamaran with three-storey sails that can fly across the water at 55 knots. To the uninitiated, today's vessels are remarkable. To the old-timers in the sport, they might feel that the spirit of the sport may have been lost".

He mentioned FIA data for ethnic diversification to relate to his thought, "There is hard data available in the annual fan surveys prepared for the FIA and FOA that define ethnicity. Beyond Lewis Hamilton occasionally being called a monkey, ethnicity does not seem to be a major component, presumably because most drivers are white. Team members are marginally diversified, but either due to manufacturer requirement or by individual initiative. In the past half-dozen years, there has been an Asian ownership component in two of the teams, but the teams themselves are based in England". This is potentially confusing with culture and national identity.

To comprehend any confusion, 013 attempted to explain North American F1 culture, "At the team level, the influence of North America is limited to North Americans employed in various functions. Those North Americans are employed in F1 due to personal initiative as they are not spreading a North American doctrine. As a driver, the person with the most current experience in F1 is Scott Speed, but his experience is severely dated. Up-and-coming drivers who might provide additional perspective are Alexander Rossi, Conor Daly, and Michael Lewis.

Additionally, it is important to distinguish between each North American country. When including Mexico in the mix we can ask if Sergio Perez is a national hero in Mexico, or is he just another driver, with limited following? Perez won a race last year [incorrect] but may have lost his flavour because of lack of results and a future that is limited. Mexican Carlos Slim, one of the most wealthy men in the world, is prominently appended to the power elite of Formula One, but only because presumably the sharks want his money. In turn, he has been judicious in his corporate sponsorships and potential ownership stakes in either F1 teams or F1 venues. In Canada, if the driver becomes a winner, he is lionized. When Canadians Gilles Villeneuve and Jacques Villeneuve were in Formula One, both captured the imagination of their country even though Jacques was largely raised in Europe”.

021 (USA, journalist) also referred to people, the indefinable fan first and varied participants, as being F1 culture: “It’s the people that work in it and the people that go to its races. You can say it’s the firms that are involved too”. And he too believes there is a North American impact: “There are all kinds of North American influence in its history and it continues now. There are quite a few American companies there and now some Mexican ones are getting in. And there are many people employed in Formula One too. But I think the race fan is the most important single factor”.

A large spectator group and a qualitative one are two separate matters, as perceived by 008 (USA, television), “F1 has a very loyal audience in North America but not a very large one. It takes a huge commitment to watch a race on television because of time differences. It lacks a kind of sophistication to be competitive in this market. This market is too competitive with too much to offer. Formula One needs to be creative”. Market penetration can still succeed regardless in his opinion: “It can be [achieved]. The problem is the North American races lack stability. Basically they move locations too much. I’ve been around for Watkins Glen, Dallas, Detroit, Phoenix, Indianapolis and now Austin. Canada has seemingly found a home in Montreal but only after Mont Tremblant and Mosport failed. There is no history. Some races are the product of a small number of individuals. The sheik in Bahrain is an example. He can write a check to get his Grand Prix much easier than any promoter in North America. Promoters here must count on ticket sales only to create a revenue stream. All the races in North

America have always lacked history which makes them difficult to promote”. How F1 is portrayed in North America and what can be done to allow cultural growth remains unanswered by its experts, “Ron Dennis, the former chief principle of McLaren, once said the United States is the world’s biggest island. We have our own brand of sports. Canada does too. So F1 is tough to stick. F1 needs to participate more to succeed here”.

Public relations people and journalists are typically good sources of information, especially in sport. 007 (USA, journalist) found much agreement with 008, “Canada and the race in Montreal is one of the favourite races and venues for the F1 fraternity. They also enjoyed going to Indianapolis. But the F1 fraternity knows that they need to do more to make F1 popular in the USA”. His closing statement, reiterated by others, advocates a single thought that the research interrogated, “The bottom line is F1 needs the USA far more than the USA needs F1”.

005 (USA, corporate executive) first sought to identify the North American culture, “I am sure there is but it is not as obvious as the British influences. Let us face it, Formula One is mainly British but it has a worldwide appeal,” and a possible remedy, “I think it’s the desire of young American drivers that set a goal of reaching Formula One and representing the United States. That was my desire. I should add that Firestone Tire was part of Formula One history and culture for a long time and that’s very American”.

6.2.2 Nationalism, Patriotism, and Passion

It is interesting to get various takes on North American WFOC culture from outside the US because it offers mixed views, as 004 (UK, journalist), a British national based in the USA, noted, “Maybe insignificant in some ways. It’s not mainstream. NASCAR receives greater coverage in the media and has better acceptance for that whereas Formula One is treated as more of a fringe sport here. It is not where it needs to be”. The assertion that is not mainstream can indicate it does not exist, is very small, or is not noticed. To understand fully, we asked 004 specifically about the popularity of the North American Formula One race events globally. “Not like they once were in world terms. Location is relatively insignificant

to the world today. People in the sport however love it to some degree. The lifestyle with bars and restaurants make it very popular with them. This is very true for the drivers because they are rather obscure here. They can go out to a restaurant and not be bothered”.

It could be agreed that the British dominate the WFOC, but there are a multitude of corporate cultures. 015 (UK, F1 team engineer) identified, as an example, a corporate culture that is not mainstream: “The Japanese at Honda had a programme to develop a culture on how to work as a team, work fast, work initiatively etc. In fact all the positive attributes that F1 would impart to a corporate structure. Initially this worked very well, but some members of the F1 team within Honda racing were considered too important to racing success to be sent back to corporate Honda in Japan. When Honda pulled out of F1 they believed that the racing team, all its knowledge it gained, would be absorbed into the corporation. Unfortunately many race team members could not face life in the corporate world and left Honda to work in F1 for other teams”.

Canadian cultural opinions are unique because of its French influence in Quebec, Anglo influence in Ontario and central Canada, and American influence in the far western provinces, as 028 (CAN, journalist) observed, “Canada is a little bit American and a little bit European. And Montreal is probably a little bit more European than Ontario. The influences on us are far greater so there is a noticeable difference that can’t be denied. Quebecois or Quebecers have a zeal and intensity for Formula One that can’t be found anywhere in the world”.

This is an unexceptional impression and 028 consented, highlighting its European pressure, “Canada is a multi-cultural society. We are impacted by most ethnic groups from the entire world and this is entirely true of Montreal as well. Montreal has a big French influence but also English, Italian, from Portugal, Germany, Poland, and everywhere in Europe. There is no other place on the schedule that has so many influences that love the Grand Prix”.

Sentiments from the Continent bring stability to understanding F1 culture, and F1 can be at its greatest intensity with Italians. “In my opinion an Italian GP can be very well felt because all the country can gain from it,” maintained 016 (ITA, F1 team engineer). He called it nationalism in its ultimate form, because the entire population from a medium-sized nation can relate to a countrywide event, “Yes, I

think so. For sure I would be very proud to have an Italian GP but we have one. This is something for the people”.

Passion is a word every Mexican used to describe the country’s F1 culture in this research. Mexicans feel their culture is superior when compared to F1 culture as a whole. Mexican race boss 020 (MEX, FIA executive) first described the culture of the WFOC, “Motorsport is a cultural part of humanity. It involves factories, technicians, engineers, tracks with sophisticated materials, advanced safety systems for drivers, powerful engines and materials. The support of many people is needed on tracks to offer safety devices. It requires specialized training and many years of drivers at the tracks. As long as motorsport prevails, people will have as a goal to be in control of their own creations”.

014 (MEX, OMDAI executive) talked about Mexican culture building a nation’s awareness, “National pride was achieved at a high level [hosting a WFOC event]. People from everywhere got to experience Mexico. Most of our people are poor but all of our people are very proud of our heritage. We got to show this”. He used past events as an example of blending sport with culture, “In the 86 to 92 events strong cultural achievements were made mixing sport and cultural events ties”.

Cults are a curious part of Mexican heritage and F1 has provided a certain cult following. 014 identified the current Mexican driver, “Since Checo’s [Sergio Perez] inception in Formula 1 since 2011, he has created a giant fan base and also a popularity trend in media”. Most nations that host a F1 race are somewhat financially stable. In recent times Mexico and India would probably be the only two nations on the calendar that we can categorize as being poor countries, and they share some cultural traits, “Mexico shares with India the same passion for a driver in the championship I believe, but I think Mexico is has a far greater passion for the sport”.

Dionísio, Leal and Moutinho (2008) found similar conduct, which they refer to as tribal behaviour, in football (soccer), where, “The intention is not to recognize tribal relationships between fans and their club but to identify to what extent the fan commitment level can impact the preference for sponsor brands”. This explains

how commercialism discussed in the previous chapter targets culture as a way to increase sales (Dionísio, Leal and Moutinho 2008).

Tourism is a key ingredient in Mexico's coveted Grand Prix race because of the reciprocal cultural and social benefits enjoyed between Mexico and the rest of North America. 014 said, "If you have hosted as a country a glamorous event like this, the social benefits are huge. The WFOC being recognized as the pinnacle of motor racing attracts a large audience that delivers media attention and a big pack of sponsors. Tourism is another social benefit that plays a significant role in the equation and also the creation of almost 500 new jobs per event".

010 (MEX, Indy-car driver and F1 manager) thinks WFOC culture can do more, "It needs to be more fan-friendly. It can still be elite but not as much. It needs to be more like Indy-cars. They need to do it. They need to produce awareness of its drivers. It's OK to be elite but not to this point". He was definitive on how this can be accomplished: "At the upper levels, Formula One can learn from NASCAR and Indy-car by giving the customer access to their stars. You don't see it in Formula One but it's part of the show in the USA. It works very well. Access to areas to allow the fans to meet and greet is a way the people can be part of it. There must be prescribed times and places to make this happen. Also the drivers need to be regularly away from the circuit. I suppose there are other ways too. Car shows and displays so people can see the cars close up and learn about their technical side".

Mexico, unlike some other modern events in Asia and the Middle East, has a rich history and cultural romance with F1 that can be re-ignited. 010 added, "The Rodriguez brothers instilled this passion with the people. This was huge and you can still feel that today with the older people. Indy-car is similar to F1, and that romance existed with me for them too. With the arrival of Sergio and Carlos it can be bigger because things tend to be bigger over time".

Zeal, a word used to describe Quebecois in this sub-section, is also abundant in Mexico to show off its culture. 010 continued, "Perez for example has re-ignited interest throughout the country. So there is lots of enthusiasm. Not as much of it has when CART was in Mexico though because times have changed. When CART left there was a vacuum of space that was not filled. A race needs full support of television. But a Mexican GP needs to have a Mexican driver in it."

Despite a new event and two participating drivers that will build its F1 culture and national pride, he was somewhat sceptical it can achieve victory, “The passion and romance are not enough for a GP to succeed”. 010 believes a nation short on monies and high on corruption may fail in the long run.

History, its people, and its fervour are the consistent theme that separates Mexico from the rest of North America and the world and 029 (MEX, television) concluded, “Our history and are people are unique to the world. It’s not like the closeness of Europe. Mexico is its own place unlike the United States and our people are extreme in their display of passion of the sport”.

6.3 The Role of Identity in Shaping the WFOC Fan Base in North America

North American culture is different from most other global cultures because of its diversity and multi-culturalism, in the opinion of Kottak and Kozaitis (2003). Diversity and multi-culturalism are mainstream in North America and separate that continent from other places visited or affected by the WFOC (Kottak and Kozaitis 2003).

It has become apparent in this research that culturally the largest and most significant segment is the WFOC fan base. The fan base is vast and can vary extensively by event location. In effort to determine two North American fan bases, American and Canadian, based on event location, this research conducted two questionnaires to identify the fans better by demographics and other cultural criteria.

Rein, Kotler and Shields (2006) assign a distinct value to the quantitative nature of a qualitative approach of obtaining essential data. “In this Elusive Fan age, the sports market needs to be segmented into useful and precise dimensions in order to connect with an ever-changing fan marketplace. These motivational and emotional connections are often overlooked, yet they have enormous influences on the experience. In the search for more meaningful relationships with sport fans, there have been a number of research methodologies developed that attempt to understand how fans connect with sports” (Rein, Kotler and Shields 2006: 55).

The authors also observe the potential of clear-cut reverberations from enriching directions. “Cultural trends often motivate transformation because they often have unintended sports consequences” (Rein, Kolter and Shields 2006: 125).

The WFOC sport fan is unique because they surface from an embroiled competitive surrounding with a formable global capacity and prowess. Its ability to penetrate barriers exceeds that of most, if not all, global sport fans. “Sport fans have never had so many options, opportunities, places, and events to spend their time and money. Add into this mix the hundreds of other cable and satellite television channels, video games, DVDs, and interactive websites, and the number of entertainment options at home make it convenient for people to never leave. And if they do, there are restaurants, movie houses, galleries, theatres, reading groups, grocery stores, lectures, coffee shops, museums, shopping malls, and concerts all vying for the attention” (Rein, Kolter and Shields 2006: 4).

In Section 6.2 it became evident that the ‘people’ in the WFOC are its culture. Some of those ‘people’ are found in corporations and teams but its fan base was steadily mentioned as its largest part in sheer numbers. Results from the questionnaires from Montreal and Austin can be found in Appendix V and Appendix VI, underlining the Canadian and American fan bases and the particulars of their culture and national identity without argument. The Grand Prix of Mexico was last held in 1992 and the next event did not take place until late 2015. No questionnaire was conducted for Mexico.

6.3.1 Outcome from the Questionnaires

The two questionnaires were developed to attain specific demographic information for two culturally and geographically different WFOC events in North America pertinent to this research, indicating what Kottak and Kozaitis (2003) call North America’s mainstream diversity and multi-culturalism.

Overall, approximately 52% of all samples were male and 48% female; however there were a greater percentage of males at Montreal and a greater percentage of females at Austin that were polled. Other recent survey results show a slightly larger male base, but the results of this questionnaire are consistent; thus acceptable.

The average age was younger in Montreal than Austin. The largest age group in Montreal was 42-47, and in Austin it was the 48-53 group. The second largest group in Montreal was 36-41, and the second largest group in Austin was 42-47. These numbers combined accounted for 46.5% of all persons polled in Montreal and more than 60% in Austin. Almost 66% in Montreal and 77% in Austin were between the ages of 36 and 53. These numbers may show a slightly older fan base than other WFOC locations found in other surveys.

There were substantial differences in marital status between the two events. More individuals were classified as single in Montreal (42%) than Austin (38%). Montreal had a higher divorced rate (22%), while more people were married at the Austin race (43%).

Austin race-goers were significantly more educated than Montreal. Over 71% at Austin held a college degree and almost 86% had attended some college compared to just 16% and just over 57% at Montreal respectively.

There was also a large discrepancy in income between Montreal and Austin. Forty-three per cent at Austin had an annual income in excess of US\$100,000 compared to around 8% in Montreal. Sixty-two percent in Montreal and 36% in Austin had an annual income between US\$50,000 and US\$100,000.

Montreal attracted a more cosmopolitan fan base. While 64% were Canadian by nationality, there was a strong ethnic influence from Europe; dominated by French, Italian, and Portuguese ancestry. Americans, with easy access into Canada, were its second largest group at almost 29%. Austin attracted mostly Americans (89%). About one-tenth of the crowd at Austin were Mexican nationals.

The majority of the fans polled attend only one WFOC race per year: 75% at Montreal and 86% at Austin.

About 62% of the fans at Montreal were from the metropolitan area and almost 92% came from Quebec, Ontario, or the northeastern United States. The Austin race was a tourist destination with almost two-thirds of the attendance travelling from a distance outside the county.

While the Montreal fan was more enthusiastic, research indicated a stronger connection to the World Cup than the WFOC amongst them (49% to 37%). Fans

in Austin rated their Grand Prix event of greater impact of globalization than the Olympics (53% to 40%) or the World Cup (7%). Both groups overwhelmingly considered the WFOC a legitimate part of globalization (80-84%).

Virtually every fan in Montreal and Austin considered themselves to be a WFOC fan (100%). Most considered this a self-developed preference.

English was the most dominant first language in both locales. In French-speaking Montreal, English (45%) was followed by French (34%) and other European languages. Eighty-seven percent of those at Austin spoke English and 13% spoke Spanish. The great majority in both places followed the WFOC in English language media.

Montreal fans were more culturally involved with the WFOC interest. Thirty-seven percent supported a driver of their nationality and 23% supported a team of their nationality. The American fan was more generic, stating support for the sport (36%) or the event (21%). Mexican fans at Austin pointed out support for Mexican drivers at the US Grand Prix. It was thought the Canadian Grand Prix inspired greater nationalism than the US race (96% to 79%).

Canadian and American fans agreed on the issue of what a WFOC event contributes globally. Tourism or a targeted destination prevailed as the primary global impact from these two events. In Montreal, 36% considered it a showcase for tourism and 34% for world sport. In Austin, 57% considered it a showcase for tourism and 23% for world sport.

However Canadian and American fans split on how this 'works' in the home nation. Fifty-five percent of Canadian fans indicated 'as being part of a world championship' compared to 34% of the American fans as its first reason. Almost 29% of the American fans 'liked' the idea of showcasing American products on a global stage compared to just 14% of Canadians. Being part of world sport was also named by both groups.

The Canadian fan widely believed the WFOC is popular in both North America and globally (100% and 99% respectively). The American fan was more pessimistic in their own assessment. Less than three-quarters of those polled considered the WFOC as popular in the USA and 94% worldwide. These

percentages are likely optimistic because non-fan research would probably drop these results to single digits.

Canadians believe that international reach (44%) followed by shared technology (41%) are the two most obvious reciprocal benefits between the WFOC and North America. Tourism (37%) was considered by Americans as the biggest benefit, followed by shared technology (29%) and international social reach (26%). This is an interesting result, because a) technology ranked higher in Canada than America even though most North American technology is made in the US, and b) tourism adds a strong business element that was not originally intended in this research as a 'strong player'.

Both North American events are believed to be portrayed in the world media as popular by both groups on an average of more than 7 to 3.

The North American F1 race fan strongly believed that the WFOC is an effective way to advertise and market products globally. More than 97% of those surveyed in Canada and 83% in the US agreed with this premise. Ferrari was mentioned in both questionnaires as the number one recognized global brand or product, a position they have held in virtually every survey of this kind for several decades. At Austin, Ferrari was mentioned by virtually every respondent. Red Bull has gained noteworthy attention in this research, continuing to grow its brand name awareness. At Austin, Red Bull was mentioned by all but one respondent. Computer, telecommunications, petroleum, automobile manufacturing, tire and rubber, beer and spirits, air delivery service, and a wide range of other companies and products were named in both questionnaires. Fans in Montreal were able to name more participating corporations and products than those at Austin, underscoring their awareness of WFOC advertisers.

There was a relatively low understanding of contributions made by North American corporations to the WFOC amongst race fans, thus much lower amongst the general population. Fifty-three percent at the Canadian event and about 29% at the American event answered in the affirmative. At Austin, more responded negatively (36%) and the same number (36%) did not know.

About 70% in both questionnaires agreed that a WFOC makes it a tourist destination for North Americans. The average disagreeing with that assumption

was 6%. A greater amount found Montreal and Austin to be desirable tourist destinations for non-Americans (74% in Canada and 86% in the USA). It was soundly agreed that the WFOC events in the two nations produce consequential amounts of income for their local economies (89% in Montreal and 93% in Austin), thus assigning a characteristic value and rationalization to the events.

Canadians dichotomized evenly at 41% regarding government monies being allocated for expenditure to support a WFOC event. Canadians also broke evenly at 33% on which form of government should participate: federal or provincial. This could imply a population more amiable to a moderately socialistic government. Americans were boldly against any government involvement to support a WFOC race at 79%. Only 12% of Americans would support government financial input, rejecting federal funding and accepting only state, county or city government injections of money. This may suggest favouring a more private sector or capitalistic attitude towards race promotion. City government participation was not named in either questionnaire.

6.4 Nationalism and Patriotism in the WFOC

The research shows evidence of both a strong link and confusion between culturalism and nationalism. While we have identified culturalism, nationalism or patriotism as a means for a person to identify with one's nation or cause, the connection between culturalism and nationalism exists because of fixed geographical adhesions. Nationalism or patriotism is the actual demonstration or exhibition of allegiance, devotion and love of an individual's country or ideology. Both are nouns that act more like verbs.

"Academic research should be a reliable source of information on sports fans, their motivations, behaviour, and role in society, but social scientists claim they don't know enough. In *Theorizing Fandom, Fans, Subculture and Identity*, a book written in 1998, Cheryl Harris and Alison Alexander tell us that: 'Fans and their social and cultural environment are untheorized in social sciences; we know virtually nothing about what produces fandom, what role they play in social and cultural processes'" (Bognon 2008).

“Sport and nationalism are arguably two of the most emotive issues in the modern world,” says Bairner (2001). He adds, “The nation itself is one of the most discussed concepts in modern social and political thought. Its precise character has been subjected to a wide variety of interpretations, with languages, ethnicity, geography, religion, and shared experience all having been cited as fundamental determinants”.

Bairner cites Hoberman and concurs, “Sportive nationalism is not a single generic phenomenon; on the contrary, it is a complicated socio-political response to challenges and events, both sportive and non-sportive, that must be understood in terms of varying national contexts in which it appears”. What may be constant is the following: “It is true that sport fans of any nation will delight in the sporting success of their compatriots” (2001).

Bairner gives the impression that because of America’s unique sporting culture, its inevitability of Americanization, and expansionism, patriotism, opposed to nationalism may be an ideology more closely associated with Americans than the rest of the world. Tomlinson and Young (2006), using the 1984 Los Angeles Olympics as an example, would find agreement with this assessment. However, Bairner concedes Americans are more concerned with domestic rivalries than interested in international competitions.

Tomlinson and Young (2006) identify three distinct types of nationalism: cultural, national and sporting. This research found a reasonable foundation to find accord with these three definitions. These authors quote ideologist Polakovic referencing cultural nationalism, using the 1978 Argentine World Cup team as a case history, as a connection when “nationality accompanies the individual and marks his personality ... and from the point of view of sport, the national team is like the folkloric ballet that represent the best of a nation”. Tomlinson and Young (2006) later tie in corporate involvement or sponsorship of multi-national firms as a distinctive part of cultural nationalism. They expound on national identity as the legitimate association with one’s naturalized homeland or adopted homeland and consider sporting nationalism as the wave of popularity of a particular or respective recreation.

Rein, Kotler and Shields (2006) in defining the fan indicate seven major characteristics or influences: 1) pressurized competitive environment, 2) higher fan

expectations, 3) paradox of commercialism, 4) new technology, 5) individualism, 6) changes in family structure, and behaviour, and 7) time pressure. It is conceivable these are inclusive to the nationalistic or patriotic fan. The authors robustly relate nationalism with commercialism and technology, which allows nationalism the ability to make changes that affect family structure and behaviour.

Silk, Andrews and Cole (2005) jointly illustrate how the ultimate show of patriotism occurred after the tragic September 11th events with flag-waving displays at the 2001 World Series, 2002 Super Bowl and 2002 Olympics at Salt Lake City. Other identities are indigenous and may be unknown, yet they exist. Power and the politics that manufacture nationalism and patriotism are commonplace. Media is a vehicle that can produce cultural nationalism and the authors suggest that radio and television created a hockey culture in Canada. The authors acknowledge corporate nationalism as something that can “capitalize upon the nation as a source of collective identification and differentiation’ by way of global capitalism”.

In essence, this sets up how nationalism and patriotism is displayed in the WFOC both culturally and otherwise. This research seeks to describe this behaviour, how it is observed, and dispel false notions.

6.5 Observations of WFOC Nationalism

This section on nationalism is a charged narrative that seeks to ascertain its composing principles and how it is portrayed. It further undertakes to subjectively locate nationalism in the North American WFOC fan. Again, this challenge was undertaken in nation order to gain opinions.

Describing nationalism in the WFOC has proved varied and difficult to sometimes comprehend, for example 003 (USA, journalist) offered this dual explanation: “Nationalism can be defined in two ways. There are both drivers and teams to talk about here. A driver can capture the imagination of a country. In the most recent years, Michael Schumacher and Fernando Alonso were responsible for boosting television viewing in their host countries. In England, TV ratings soared when Lewis Hamilton and Jenson Button were capturing their first championships. As applied to the US, however, unless the driver has the charisma of a Mario Andretti or a Jeff Gordon, the driver would not reach the popularity of a Tiger

Woods. Interestingly, virtually any Formula One driver can walk almost unrecognized in the United States, including Lewis Hamilton and Michael Schumacher. In terms of the nationalism of teams, there are only two: Ferrari and everyone else. Amongst the remainder, McLaren is almost a national treasure, due to its road car initiative and its other technological companies. The allure of Ferrari is almost self-explanatory. That Formula One Holdings considered Ferrari to be the most important equipe of its team negotiations, granting Ferrari the most beneficial terms, is reflective of its worldwide status”.

The fan is often considered the basis of nationalism in sport, as previously discussed by Bairner (2001) and furthered by 003, “From the fan perspective, nationalism is demonstrated in support for: Fans are for specific drivers that usually reflect the fan’s nationality and those who are supporters of Ferrari”. How they may act is a matter of observation, “In the past, before commercialism, a decal of the flags of the driver’s country had to be displayed on the car and the colours of the cars were dictated by the country where the team was based. Today, the flag of the driver’s nationality may be sewn into this driver’s uniform; teams generally show no overt nationalism, except for Ferrari, that maintains the country colour. What is often seen at European races are fans bearing flags for a driver’s home country. The fans of Spaniard Alonzo will travel to a distant race and display the country colours with a flag. In the past several years, drivers, along with athletes in general, are prone to wear their national flags when they are successful, after an event. When it is done ‘de rigueur’ it is almost an insincere, if not insulting, gesture”.

Flags are the most dominant object displaying nationalism, and North American participants in the WFOC have made use of flags as a preferred choice of national identity, “Some American involved firms may attach a small American flag to its product or someplace visible on its equipment. Jacques Villeneuve always had a Canadian flag on his helmet that made him easy to spot. The Andrettis had that famous helmet style with the flying American flag. Scott Speed was the last American in Formula One and he had some sort of flag design. There are two Mexican drivers now and both have Mexican flag colours worked into their helmets although it becomes confusing with the tri-colours of Italy. Even in Indy

Cars here you see nationalism displayed. Look at Dario Franchetti. The first thing you will notice is the big blue and white Scottish flag that stands out on his helmet”.

003 said what becomes difficult to ascertain here is the role that this all plays out to have, as he concluded, “It is safe to state that a successful F1 driver does increase the nation’s interest in Formula One. The interest in Canada when Gilles Villeneuve was competing in F1 and two decades later when his son Jacques Villeneuve captured the imagination of the country. The father, who was born in Canada, had a much greater profile in Canada, than his son who was raised overseas. In turn, when Ayrton Senna was killed, a national day of mourning was declared in Brazil. A sportsman has the ability to lift the nation on his shoulders. There has not been a top-flight American race car driver in Formula One since Mario Andretti. Prior to Andretti, the benchmark was Dan Gurney. Even though Andretti was not born in America, he accepted America as his country more than his birthplace. Moving on, there is some nationalism in teams and manufacturers. Without question Ferrari represents the best that Italy can produce. The engineering feat captures the imagination of the citizens of Italy. In turn when Honda was dominating the series as an engine provider there was a surge of interest in Japan. Several years ago some entrepreneurial folk tried to create a Formula One team to be based in Charlotte, North Carolina. It is difficult to envision that just calling it USF1 would not have generated much nationalism compared to a Ford or Chevy powering an F1 car to the championship. It will be interesting to see if China will experience a surge of nationalism if either a driver or a power plant becomes victorious in F1”.

013 (USA, corporate executive) declared strongly that nationalism exists in the WFOC: “Nationalism is huge in F1, Great pride and honour is bestowed on the nations of the teams and drivers that win F1 Championships. It is an international sport with events held in a variety of developed countries around the globe and the entire show is marketed as a vehicle similar to the Olympics in the way it focuses on national glory for the winners”. To substantiate this, the research solicited examples, to which he replied, “A very notable example of how nationalism is displayed in F1 would be the raising of the flag and playing the winner's national anthem at each event. This is in honour of the nation the winning driver hails from. Also, technology is paraded as German, Italian, French, American, British, etc.,

with a great deal of national pride at stake. There are, however, instances of joint national efforts on display in some teams, with a chassis from one country and a power plant from another”.

In F1, some corporations willingly cooperate in display of national identity and this may be best exemplified by drivers and their respective helmets, “The artistic design on the helmet often displays the driver’s national flag or colours are very common,” said 013. “Bell has a network of helmet painters [as do all other helmet manufacturers] that will work with the driver to design and custom paint the helmet to the desire of the individual driver”. Again, illustration was requested: “The made in America label still means a lot for certain products. Bell’s European distributor who now owns the auto racing Bell brand always thought it was very advantageous that Bell helmets were made in the USA back when I was running Bell Auto Racing. But my guess is that has diminished some since then”. At the same time, nationalism is not always intentional, “That is not the primary intention here but there is some truth to that. At Bell we were very proud to be representing America in F1. And our friends in Europe liked that link too. They told us so”. Helmets offer more than head protection, “Helmets of course is my answer [a way to display nationalism]. Almost all the drivers have very personal designs that incorporate their national colours or something else. It could even be from a city. Michael and Mario [Andretti] had a very specific American flag design on their helmets. It stood out quite well. Everybody knew it was Michael or Mario by the silver helmet and flowing US flag”.

Another question is to evaluate which is the better entity to display nationalistic pride: a WFOC event, a WFOC team, or a F1 driver, on which 011 (USA, FIA executive) commented, “This depends on the size of the country. The United States needs a high-calibre driver with a top five team to make an event a success. I don’t think we have that guy right now and if we did he would need to be with a team like Red Bull or McLaren to create any excitement”.

The US is a large country which conceivably can host more than one WFOC event, considering many smaller nations in close proximity in Europe host their own separate Grand Prix. The WFOC administration plans to have two US races soon, with New York/New Jersey a possibility. 011 discussed location as a focal point to being successful, “I think New Jersey will probably be successful. I think Texas

could have problems. It's a bad location and a bad time of year. Maybe it will be better for them if they get a better slot on the schedule when it's not so hot". There has already been failure for various reasons but financial support is imperative to its success, "They will both have the same problems as Indianapolis (which held the US race from 2000-2007). It's about how much money you have and how much money it will take". He said it is impossible to predict its survivability in the US, "That's an interesting question. I think New Jersey is more apt to be the one because a lot of the right things are happening there. It has support from the state and it is close to lots of business in New York. But the better question is will there be a Bernie Ecclestone ten years from now. He's getting older and he will never give up control. Eventually someone needs to take his place and we really do not know who that will be. Really that does not matter now. There are too many factors that we can't control."

There are some in the F1 community reason that the North American rounds should collectively work together to achieve a greater awareness as a continent. Ollie Miller does not see this being of significance between the US and Mexico, "[Mexico] don't have much disposable income so I doubt it as ticket sales go. They will support its own race though in a big way". However, he placed greater value on a Canadian connection, "Canada is fortunate to have a great fan base. I can see them coming from eastern Canada in droves".

Like many of his peers, he believes a driver, not an event or team, can inflame national interest in the US, "A driver can develop into a team for the United States. This would be the best scenario. But you need the right guy and there really has not been the right guy for a long time. For one, the American guys are not dedicated enough to be in F1. American drivers are entrenched into NASCAR and Indy-car and really don't need Formula One to be successful. America needs at least one top driver in Formula One. But the right driver can lead to a team and that can all make a race successful in America just like Mario [Andretti] did it years back". This notwithstanding, events can be more practical in other places, "It is quite a bit different. Events there will be a success regardless because they have a greater passion to begin with. They can be satisfied with just having a driver in the race but the better the situation makes the whole thing more special to them. This is especially true for the Mexicans".

Big business can accommodate drivers, teams and events with corporate sponsorships to materialize nationalism as well: “If they want to then they can and you see this from time to time. There are enough American companies involved already. It’s just a matter if they want to do it here as opposed to somewhere else where it might work better for them”. His later comment signals that the infrastructure for American support already exists.

Government is overlooked as an energetic conduit in generating nationalism by supplying promotional monies, particularly in the US: “Smaller economic zones need to call upon it. Management takes too much from these races or maybe we should call it happenings. Really it is a necessity to take these local government monies. So maybe it’s not wrong to take these monies if it makes the people happy. This could never happen in the State of Illinois. Our state government would not allow this to happen here,” said 011.

In his final analysis, he shared the view that helmets are the most common display of nationalism, “Well, there are several things you can say but the helmets on the drivers. The colour of their flag or a flag design on them from places like Brazil, Germany, Japan or wherever they come from”.

Most interviewees failed to notice the victory circle ceremonies where the winner’s flag is unveiled as an area of national pride. 002 (USA, SCCA executive) said, “The thing I remember best is how the Germans came out for Schumacher at the height of his career. Germany had two races for a time at both the Nurburgring and Hockenheim and both events would be sold out. Germans would be parading the German flag on the grounds along with their Ferrari gear. Back then Germany could have had ten Formula One races and each one of them would be sold out. I don’t see that so much with the new German kid [Vettel]”.

This particular exposure has not been seen in the US in recent times. “No, not in the United States,” 002 added, citing the lack of an American driver in the series. “It did for Canada when they had a driver. Canada’s population is smaller and more contained so that may be part of it. Plus its racing interest is mainly in just two provinces [Ontario and Quebec]. If Mexico could get something going it could be big. The Mexicans are crazy about Formula One. The problem in Mexico is money and organization. Years ago we did a Formula 3000 race in Curacao [Caribbean island] and there was little interest. We never went back”. 002 was the

Chief Steward of that race. Formula 3000 was a single category down from Formula One at that time.

Not every professional detected US corporate participation that can generate national pride, 025 (USA, corporate executive) noted, “Not for us. I can see this in say Renault and France. Renault is a huge employer in France and more or less a national automobile manufacturer. So there is a very intimate relationship there that naturally includes a nationalistic instinct amongst its own. We can walk around the paddock and be all proud about our cells being American but very few people will care about it being American or Chinese”.

005 (USA, corporate executive) believes there is massive nationalism in the WFOC but not in the US, as he explained, “Sure. There is nationalism almost everywhere but here. Look what Senna has done for Brazil or Prost in France. Jean Balestre, the French president of the FIA, literally cheated with the rules to allow Prost to win the world championship. He crowned a world champion in the name of nationalism”. In addition, he observed commercialism as a nationalistic channel, “Sure. Renault sells lots of cars in the UK and the French are proud of that fact. But consumers will basically buy anything no matter what if they like it”. 005 agreed with most others interviewed that Ferrari is considered the pre-eminent national pride generator. “Ferrari transcends all nationalism. Ferrari is such a strong brand. Everyone wants a Ferrari but not everyone can afford one. It has worldwide appeal. Just look at any grandstand at a F1 race. There are too many Ferrari flags to count.” He exceeded all nationalism found in the WFOC by stating, “Ferrari is Italy”.

While some believe teams can manufacture nationalism, 005 differed, “Only Ferrari. That’s a different pedigree. Brits don’t automatically support McLaren. The Japanese will support a Ferrari or whatever they may choose [as its driver regardless of nationality]”.

There was a consensus that the national NASCAR series is a better nationalistic medium for the US because of commercialism. 005 concluded, “NASCAR is not Formula One but NASCAR fans will buy any NASCAR product. That kind of loyalty does not reach that level in Formula One. As a whole, though, there is not a lot of nationalism with consumer products in Formula One”.

023 (USA, corporate executive) gave his version of how nationalism may be played by a non-automotive company (not consumer products) in F1; particularly the aerospace industry, that has been discussed in this research, "There is an apparent realization. Everyone in the F1 circus knows we are American and what we do but it's not something we intentionally go out of our way to push the thought. A good number of race fans know our name from the airplane industry and they make that association to America as well. Our presence is founded on making good business practice". This is unmatched by any nation in the WFOC because only the American aerospace industry can make this claim.

007 (USA, journalist) mentioned it is very visible where nationalism in F1 is virtually bred: "It is huge in the fact that guys like Michael Schumacher attracted many new F1 fans from Germany, and Nigel Mansell brought in new F1 fans from the UK. Also, as you can see by the nation's flags the fans carry, they support the drivers from their country". He confirmed the driver is the best way to attain this, "Definitely the answer is yes. It is very clear this creates a form of nationalism. This happens in any nation with a F1 driver".

008 (USA, television) believes nationalism endures but it is greater when you have a presence (driver, team or event): "It has a role to play. But it has no strong presence here. It's hard to measure if it really matters. Even in some places in Europe it has changed. Interest in Germany has fallen since the Schumacher heydays at Ferrari. It really did not come back on his return to the sport. Not even with Mercedes. Now France on the other hand is very unhappy with no French driver and no French race. Japan has a desire to be in the big league, too. Like when Yamaha was in Formula One. It was pride and familiarity". Without an existence in a given place, nationalism can be futile to behold.

Purists exist in the WFOC, more so with Europeans like 018 (BEL, F1 driver), "No [there is no nationalism]. This is motor racing. It is only about the car and driver. Maybe in some other sports but there is not in motor racing". The research offered the example of a helmet with the colour of one's flag, but this was dismissed because it is not part of the sport, "No. This is not part of the race driver or the car".

026 (BEL, corporate executive) found some harmony with American opinions that it only prevails when it can be observed and the potency of Ferrari as

a nationalistic means of expression, “It only exists where there is an interest. Right now there is no Belgian driver, so there is no nationalism; just Formula One race fans. Still in Italy there is no driver right now as well but they have Ferrari. Ferrari is always more important than any Italian driver. But this is only in Italy. The *‘tifosi’* is by far the biggest way we can see this connection with a country”. He does see potential value in corporate nationalism, “Not for Belgium because there is no large Belgian corporation involved at this moment. I get the sense there could be if a company with the purpose and the money to do it. Mercedes is a fine example. It could work well in countries like India or Japan. There are places that are easier to send your message to. Smaller populations would be best but also places that need an injection of something popular”.

It is apparent that the WFOC is dominated, in many respects, by the British, thus making their viewpoints on nationalism paramount in this study, 004 (UK, journalist) said nationalism can be important, “It is certainly more in some places than others. In the old days it was big in places like Mexico. It was big more recently in Canada. It really depends when you have a driver from the country being represented in a home Grand Prix. The younger generations care less about this. And the US fan cares even less. Those who followed Mario Andretti in the 1970s did not necessarily follow Michael Andretti in the 1980s, nor did the next generation. And it is more doubtful this generation would follow Marco Andretti today if he was in Formula One”.

He thinks the nationalistic variable could be useful to project F1 in the US, “It would certainly help. It would work in other nations of the world better than here. Something needs to get behind it to make that work”. He continued with something that has been reiterated throughout this report, “Really it takes money behind a talented driver but that’s not a guarantee either. It’s very difficult to say what will make it happen but you will need sponsorship to start with”.

019 (UK, corporate executive) thinks the WFOC attempts to cast and sell nationalism but stumbles: “It tries to be but not so well”. He did point out successes in this area, “The Italians. They are all super proud of Ferrari. Now you have Force India entering the arena and they are trying to promote all types of things about India”. He thinks America can succeed given the correct circumstances. He differed slightly about a nation’s flag as a way to show pride: “Button has the flag on part of

his helmet and that's nice. It's only good when you are doing well. It does not help when you are at the back of the pack". And he believes F1 can survive without nationalism, "It works for some. Red Bull wants to appeal to the world so they don't bother with any nationalism stuff. It's pure Red Bull". He does not always see a connection between companies and teams originating from the same nation as a way to campaign patriotism as well: "No. This is not like the Moon and US technology. Everybody knew the US put the man on the Moon but I don't see any of the same connection in racing technology". He added that technology is capable of doing wonderful things, "The US really put a man on the Moon. Some very amazing men did it more than once too". His outcome was this: "There is that link but it is not fortified."

Like others in this report, 017 (UK, F1 team engineer) reckoned drivers are the motivators for nationalism, "There is a lot for the drivers. Fans like particular drivers. There is a lot of support for them". Much like 019 (UK, corporate executive), he did not see a link with technology, "I don't know on that one. I don't think so". When asked which countries are at the forefront of nationalism, he said, "The Germans have Mercedes. Italians have Ferrari. The French have nothing. The Spanish like bikes better but Alonso has a massive following". Cheering and buying label merchandise are common examples, "Mainly support. It's just enthusiasm. It's a following".

In retrospect, 012 (UK, F1 team engineer) thinks technology can play a role in nationalism in F1, "I think it does somewhat. Teams are made of many nationalities so nationalism does play a role. The Germans will flaunt their Mercedes and the Japanese their Bridgestones. Everyone knows Ferrari has the best food. This is all in the paddock mind you". He assumed, "I think I know what you mean. Yes. It's not so deep to say this technology or that technology but Brits will support Williams or McLaren, Italians Ferrari and Germans Mercedes". He agreed with 019 (UK, corporate executive) about the lack of national cohesiveness between a team and a company or product originating from the same country, "I'd say probably not. These are all multi-national companies so it loses its significance".

015 (UK, F1 team engineer) noted the historical significance of national colours in F1, "It used to be that a team, where it was based, that its national

colours and its drivers were the hallmark or symbol of a national characteristic. Even the driver's temperaments were subject to being assigned a national characteristic. Fiery Italians like Andrea De Cerasis, cold calculating Germans like Schumacher and Lauda [Austrian], brave Englishmen like Mansell, manipulating calculating Frenchman Alain Prost who was known as 'the professor'. However as the world has become more global whilst these individualistic characteristics mainly hold true, the emphasis and focus has been more of the actual infrastructure of racing. The bricks and mortar facilities were forced upon organizers to develop better safer tracks, in the face of accidents and safety requirements. These included top class medical facilities. The safety requirements could be foretold by a quote attributed to Ernest Hemingway about sports, 'there are only three sports – bullfighting, motor racing, and mountaineering; all the rest are merely games'. This quote reflect the thinking of the day when death and injury were what were categorized, in Hemingway's mind, as real sports, and by inference real sportsmen. This identified motor racing, and by its capricious nature brought home mortality as it relates to sports, more noticeably than others. I might add that a few others, like parachuting, white water rafting, and a few others, should be considered if deemed a sport and not an activity". Financial constraints changed the attitude of F1, producing a commercialized environment, "Therefore, with the necessity of building more venues that were safer, and the F1 commercial management who saw the opportunity for a global audience, countries were soon applying to host Grand Prix had to thus accept the cost burden of building a special facility for many hundreds of millions of dollars, usually with some part or all from the public purse. Often this building of venues accompanied a driver development programme through the lower ranks of formula racing, to be a point of reference for the newly developing local fan base. This then put a tangible face to the sport in that country to encourage them to get behind their newly minted national sporting hero".

Opinionated but a valued contributor to this study, 015 continued with a varied point of view. "Much like national airlines, a country would view a Grand Prix circuit facility as a point of pride. It added a level of legitimacy to a government or regime. In past years some of the countries who have built tracks were also looking for that legitimacy and the sport's governing body has often not been too concerned about the certain politics or human rights of a country when awarding races – and

race drivers don't generally care about the politics in a given country as they argue they are just paid to race. Therefore, modern nationalism in F1 has developed a second branch based more on a commercial view of its significance to a country. The old colours, traditions, symbols are still there of course, but often on race day introductions on the TV commentary will make a reference to 'this new facility', or some new circuit feature before the race coverage begins of the cars, drivers themselves. Some iconic stunning architecture, memorable in itself, that includes themes from a particular culture often has been incorporated at these circuits, for example the grandstand awning in Malaysia".

Impressions are consequential and 015 thinks a US race in New York can create positive conditions for the championship, "The new race in NYC with its iconic skyline of the river and the downtown skyscrapers of Manhattan will add a new visual history to this rich panoply of images recorded in film and photographic images for immortality. Sometimes venues for the F1 circus that troops into town for these events also play a negative role in solidifying a negative image which is the reverse of the general desired intent. I remember coming away from South Africa, although a beautiful country in itself, the conditions that were visible under the rule of Apartheid were memories never forgotten". Locations of venues vary greatly, he pointed out, "It will be interesting as this circus rolls into the new venue in Russia with many of its laws and institutions very much at odds with one of the most decadent examples of western extravagance, for example Russia's stance over gay rights, and so forth. It could be argued then that a venue that is developed to support an incorrect view of a nation, to foster imagery or a narrative that a government wishes to extol can have the opposite effect, such as in the case of the race these past couple of years in Bahrain. Many in the West were unaware of the dissatisfaction of some portion of its citizens over its government and so this must have put an added unwanted scrutiny on the nation, not the desired consequence I am sure".

While technology does play a nationalistic role to some degree, he was consistent with others about the role of the driver, "Yes [technology is important], but more so the driver's ethnicity and where the team is based. Technology is generally transportable whereas birth-right, accent etc. is not, except in the case of Obama who is always being cited as being born in Kenya".

He was also steady with the non-committed link between a team and a company from the same nation causing nationalism, “Both are the same as far as I can see and if it does not do the job it will be substituted for one that does and masking stickers of some way of disguising product will be employed. Computers are a generic commodity now, however software is not and that is where differentiation is apparent”.

While it is somewhat clear a driver is the most important element in creating nationalism, the Canadian FIA official 001 (CAN, FIA executive) added another perspective, “Only if he is a front-runner. Certainly Gilles Villeneuve was a big draw, because he was a winner and a spectacular driver, but his son Jacques faded very quickly”. Being a front-running driver creates a valid condition for that facet to be considered, because back-marker drivers receive far less recognition.

The promoter of the Montreal F1 race, 006 (CAN, F1 promoter), used Canada’s favourite driver as an example of how nationalism took effect in that country, “It has an importance of course when a native from a specific country is on track as a racer and has success. We encountered that twice with the Villeneuves, father and son. We are aware of the impact Schumacher had in Germany or Alonso in Spain. The media from a specific country would normally also be very coloured when came time to talk about their own drivers”. Currently, there are no Canadian drivers in the WFOC; however the race has been able to persist due to the varying ethnicities found in Quebec as proven in this research’s sampling in this chapter, “Of course it would be better with a Canadian racer, but we have many people from many places in Montreal. You can call it a displaced nationalism. It is here every year at a very high level”.

Canadian governments has made extraordinary efforts to bring a WFOC event to Quebec, achieving grand success as local politician 022 (CAN, government official) indicated, “This is not an objective [to promote nationalism] but we would like to see Quebec and Canada more competitive in the series with a driver. The Grand Prix du Canada is very successful as an event but we would like to add more interest with a driver and maybe someday a team to represent Canada at every race”.

Here it is noted that Austrian-Canadian Walter Wolf ran the only Canadian Formula One team in history from 1977-1980; but did not employ a Canadian driver

but an American. The actual race car and crew were identified with a Canadian flag.

In Section 6.2, this research distinguished Mexican opinion about its own culture as outstanding or even superior to other cultures found in the WFOC. Mexican opinion concerning nationalism is no exception to this perception and there is a tendency to define the two subjects as close to identical in comparison to Canada or the US.

014 (MEX, OMDAI executive) celebrated Mexican culture in that section but said “nationalism and pride” were the most significant single components that emerged from Mexico’s involvement in the WFOC. Being considered largely a poverty-stricken country, he said “flags and team merchandise” were the best way for the Mexican population to display its nationalism, “Mexico is a simple and poor country. These simple flags, hats, and shirts are a strong token of the pride and nationalism we are talking about. It may not be in the US but here it is all that it takes to start the fire of emotion”. As a national authority executive he places a high value on his nation’s flag display on drivers. “Most of them show their colours for countries but there are some special cases like two-times champion Sebastian Vettel who changes the colours and designs of his helmet almost every single race and since I can recall the German flag has not been present as a predominant depiction”. Mexico is anxious to share its national pride and has affection for promoting its tourism through the sport, as discussed in Section 4.5.1. Its target audience in this regard are its neighbours to the north, “For the US it is strictly advertising, but Mexico it is both advertising and nationalism”. He insisted this works because of what it creates for its people, “Pride. Mexicans in the US and even Canada will have this way to relate to the homeland. It is not much but it means so much to our people”. The government has embraced this simple concept that works well for them, “Mexicans are very proud people and the government is in a big hurry to tell the world about Mexico’s achievements by bringing F1 to the front”. This idea would not work for most nations on the calendar but it does for Mexico, “Mexico is very poor but offers its people, its culture, its beauty, and the economic opportunities. These are the things we are proud of”. Another reason he pointed out is that there are two Mexican F1 race drivers presently in the WFOC

compared to no Americans or Canadians. Now with a race on the schedule, Mexico is in a strong position to capitalize on this ability.

For a prolonged period, 010 (MEX, Indy Car driver and F1 manager) was Mexico's premier world-class driver and he too believes the driver, not a team, is the best way to show pride, "Driver big-time. A driver carries the passion. This is the effect it had on me. Now it's not the same but it could ignite quite easily now with Sergio and possibly Ferrari in 2013 [reacting to then rumour of Perez joining the Ferrari team]". He claimed the Mexican fan is one of the most enthusiastic in the world: "Perez for example has re-ignited interest throughout the country. So there is lots of enthusiasm. Despite this intensity, 010 understood the economics of the WFOC: "The passion and romance are not enough for a GP to succeed". His definition of the excitement was a personal one, "It is the romance between the driver and the people like they had with me". He perceived a decline in national pride over the past two decades that is beginning to improve, "Definitely so [pride is coming back]. This is big and it is developing with Sergio. It is still not as big as it used to be in the 90s but it will grow dramatically with a GP." He is confident not only pride but monies will brace Mexico's re-entry into the WFOC in a big way, "It will not be easy because of the economic problems globally and in Mexico but businesses will support a Grand Prix. There is a passion to do this. They will find a way. Carlos [Slim] has those contacts, too. A GP is on a different level. Bernie Ecclestone will need to make the price right, too".

Mexican subjects liberally used the word passion to define the country's nationalism. 029 (MEX, television) said WFOC nationalism is alive in Mexico, "In Mexico we have a passion for Formula One that is much greater than any other place. You can already see this with our drivers in Formula One. The people support these two men to the point of hysteria. The television, newspapers and internet cover Formula One intensely. It may be bigger than national soccer right now. You will see this more when the Mexican race is added to the calendar. That race will prove to the world that the Mexican Formula One fan is second to none".

Experts agreed that the WFOC needs to establish a regular annual tour in North America to include events in Canada, Mexico and the US to be a 'true' World Championship. Some believe two races, even three, in the US would be

appropriate because of its immense geographical size. Continental exposure will generate a delirium which translates into nationalism.

6.6 Identification and Nationalism of the WFOC Fan in North America

What has been discovered is that nationalism is contagious and can be displayed in a multitude of fashionable modes. Nationalism is a vital extension to express a group's cultural pride that may also include patriotism.

Passion was a typical declaration understood as a demonstration of nationalism; however nationalism is an action or behaviour of greater magnitude. The contemporary manifestation of nationalism displays itself as an awareness of a unified identity accomplished through a structural system of activism. It can be arrogant, controlled, permissive, provoked, and even at times un-asserted; however its purpose remains consistent, to perform the palpability of superiority.

This conviction or emotion may be accompanied by physical properties such as a flag, clothing, or other merchandise to induce or assist in the delivery, or simply exist in enthusiasm.

Nationalism is easily identifiable and found in virtually every nation that hosts a WFOC event or has a competition driver in a WFOC race. It can also be found in support of a WFOC team and its national identity, and, to a far lesser degree, as a corporate participant. Although more conveniently performed in its home country, nationalism can be displayed virtually anywhere. It is easy to predict that nationalism can be prejudiced and obnoxious.

History would imply that Canada and Mexico would exemplify and sustain nationalism at a high level in the WFOC while the US would employ more of an attitude of exceptionalism which in itself is an aloof but dominant configuration of patriotism. Both the displayed nationalism and exceptionalism fare well despite diversity and multi-culturalism.

6.7 Confusing Culture with Nationalism

This section endeavours to examine the confusion of culture with the complexities of nationalism found in the WFOC, particularly those in North

America, through the opinions of the interviewees. The research evaluated these viewpoints by nationality, beginning with Americans.

Rex (2010) finds “the new emphasis upon ethnicity posed important problems for the theory of nations and nationalism”. He continues, “Ethnic groups, writes Max Weber, are ‘those human groups that entertain a subjective belief in their common descent because of similarities of physical type or of customs or of both, or because of memories of colonization and migration’ while he notes Gellner would say nationalism is a product of an industrial society” (Rex 2010: 17, 65).

Some, not all, subjects interviewed confused culture with national pride. It is often difficult to detect. In Section 6.2, 011 (USA, FIA executive) said, “The best example (perhaps of culture and nationalism) that comes to mind is the ‘*tifosi*’. It is but it’s not necessarily Italian. It’s really just a very important part of Formula One that can be found anywhere on the circuit. It’s this very energetic group of Ferrari supporters that can be found anywhere in the world”. However, in Section 6.5, 005 (USA, corporate executive) said, “Ferrari is Italy”. What is meant here is the ‘*tifosi*’ is also a display of Italian nationalistic pride.

He, 011, also spoke about Mario Andretti as a cult hero in the US, much like the craze for Gilles Villeneuve in Canada and the Rodriguez brothers in Mexico. These genres of affiliation and following first demonstrate national pride. The connection with a driver may be the best patriotic indication offered in this report, based on the responses received. Lastly, he spoke about past teams originating from a given nation, e.g. Penske, Haas, Gurney’s Eagle, Vel-Jones and Shadow; all from the US but each essentially based in the UK. Also with a British base, Canada, with an Austrian/Canadian owner, had the Wolf team, and Mexico was heavily connected with a Lamborghini team that never turned a wheel. In each instance, nationalism was the integral incentive for that team to compete only after the personal goal of the owners’ desire to race.

This confusion causes us to look back again at what 031 (USA, corporate executive) said in Section 6.2 about the difference between Formula One culture and Formula One nationalism in which he, reiterating, replied, “My first impression is no, but at a second notion there is a cognitive difference [between culture and nationalism]. Culture refers more to the origins, ethnics, or people sharing a common place whereas nationalism is how they sustain or display support of that”.

In effect, he makes nationalism a literal action or occurrence. His was the most comprehensible explanation obtained in research. Then, he used cheering for your favourite driver or team as an example of feasible nationalism. Of course this means cheering for the driver or team of your own ethnicity only.

While 013 (USA, corporate executive) clearly identified the ethnicity component, he did not link culture and nationalism directly, "The ethnicity or the culture in F1 has always been pretty straightforward". What he may be indicating here is that culture and nationalism can be the same thing. He is suggesting that by being straightforward, while not identical they are unmistakably connected, however the confusion.

Purposefully, the 003 (USA, journalist) side-stepped the question saying the ethnicity of team members is marginally diversified. He pointed out up-and-coming American and Mexican drivers who could ignite national pride in the future and used Canada as an example: "In Canada, if the driver becomes a winner, he is lionized. When Canadians Gilles Villeneuve and Jacques Villeneuve were in Formula One, both captured the imagination of their country even though Jacques was largely raised in Europe". He is validating that national pride originates with ethnicity and its best example is the drivers. This was an important lesson learned because it is an extension of 031's assessment.

008 (USA, television) mentioned consistency as a reason why WFOC growth in North America is lacking: Nationalism would be a by-product of growth. "F1 has a very loyal audience in North America but not a very large one," he said earlier, implying nationalism can or does exist. "The problem is the North American races lack stability" The steadiness of the WFOC commodity is essential for the existence and survival of nationalism.

028 (CAN, journalist) thinks Canada has both American and European influences which can further complicate its nationalism. The questionnaire conducted at Montreal signified that foreign populations in parts of Canada are significant and may not necessarily show allegiance to Canada.

022 (CAN, government official) agreed that Canada is a multi-cultural society, "We are impacted by most ethnic groups from the entire world and this is entirely true of Montreal as well. Montreal has a big French influence but also

English, Italian, from Portugal, Germany, Poland, and everywhere in Europe. There is no other place on the schedule that has so many influences that love the Grand Prix”.

However, both Canadians felt strongly about a Canadian national pride similar to what 003 (USA, journalist) said about giving public attention and approval to one of its own succeeding on the world stage.

Italian observations can be more predictable because of their temperamental utterance. “In my opinion an Italian GP can be very well felt because all the country can gain from it,” 016 (ITA, F1 team engineer) pointed out. In his opinion this is nationalism because it is something for its people. Not every Italian can go out and purchase a Ferrari but every Italian can love Ferrari as the perpetual representative of Italy in Formula One.

Mexican sentiments are highly charged: 020 (MEX, FIA executive) explained that motorsport is a cultural part of humanity that involves drivers, factories, sponsors and technicians. He told the research that these cultural elements produce national pride, much as 031 (USA, corporate executive) said.

014 (MEX, OMDAI executive) told us that exposure of Mexico’s cultural achievements develops this creed, “National pride was achieved at a high level. People from everywhere got to experience Mexico. Most of our people are poor but all of our people are very proud of our heritage. We got to show this”. Furthermore, he used a driver as an illustration and how they created a huge national fan base and increased media coverage. Nationalism, in the case of Mexico, can be seen as showcasing a country for tourism.

010 (MEX, Indy Car driver and F1 manager) was a robust advocate of the driver being the thrust of patriotism, “The Rodriguez brothers instilled this passion with the people. This was huge and you can still feel that today with the older people. Indy-car is similar to F1 and that romance existed with me for them too. With the arrival of Sergio and Carlos it can be seen with Perez for example has re-ignited interest throughout the country. So there is lots of enthusiasm.”

Mexico City-based 029 (MEX, television), preferred to substitute passion for nationalism, “Our history and are people are unique to the world. It’s not like the

closeness of Europe. Mexico is its own place unlike the United States and our people are extreme in their display of passion of the sport”. It is conceivable that, in some places, passionate race fans are displaying their brand of national pride.

6.8 Summary and Conclusions

Culture is a very dense subject matter under any scrutiny and the WFOC is no exception, because the other empirical chapters revolve around this particular chapter. Unlike the other two empirical chapters, the chapter on culture required a mixed approach of qualitative and quantitative research as indicated to gain the insight needed to fully understand its composition.

The research shows that culture and nationalism, despite having no fixed or precarious financial enticements, may be the most forceful component of this investigative study because of their profound ability to penetrate large populations with the potential for intense mania that surpasses commercial, corporate, media, political, and technological structures in terms of its effectiveness.

Culture is a hugely important component in this research because it considers an entire fan base and its connectivity to a category of people who identify with each other based on ancestry, language, social, and other national experiences. Culture and nationalism are not identical but are comparable, and can be complementary to each other. In this study we found that culture, a noun, is the customs and influences derived from a specific country. Nationalism, a noun, is the action of displaying a pride related to a culture. The gross human numbers, representing the ethnicities and nations, of those interested in the WFOC certifies culture as a powerful element in this research and perhaps the base of the business and sport.

The most prevailing words used to describe culture and nationalism here were often the same: *'passion'*, *'pride'*, and *'patriotism'*, causing confusion as to what may be applicable to each expression. Canadians preferred the term *'pride'* and Mexicans fancied *'passion'* to describe its culture or how nationalism was explicated. Americans were more likely to use the word *'patriotism'* to describe their relationship to their homeland.

Canada and Mexico related to their cultural history far more than the US. The Canadian provinces Ontario and Quebec rely on their strong heritage to Europe to develop its cultural habits. Mexico is more dependent on its own historical places and practices. It also utilizes these influences as a tourism feature to a greater level than Canada. In retrospect, the US is more reliant on its business culture and not any particular ancestral or heritage link. Some view its culture as '*exceptionalism*' because of the isolated relevancy.

While WFOC appeal in the US is widespread, the gross numbers are relatively small. The US, with its four 'major league' sports (baseball, basketball, football and hockey are often referred to as components of 'Major Sports Syndrome') and other sporting contests, including other forms of motor sport, is the most competitive market for the WFOC to encroach into. Canada endures the 'major league' sports concurrence slightly better and Mexico contends with its own national soccer league.

Overwhelmingly, drivers are considered the best overall way to achieve the highest degree of nationalism. Drivers outweigh events, sponsors, and teams as the best way to bring about enthusiasm and pride and are nationalistic factors.

At present, Canada and the US, with no permanent driver or team in the WFOC (the US currently has a part-time driver in the WFOC), have no tangible nationalistic connection, thus 'have little to cheer about' and nationalism is minimal. Mexico, with two active drivers and its own Grand Prix, is in the position to capitalize on its cultural approach, passion, and national pride after decades of being ignored.

There is a measurable interest of nationalism attached to certain teams (British concerns McLaren and Williams, for example) and automobile manufacturers (Japanese Honda and German Mercedes-Benz, for example); however these claims are not overwhelmingly indicated as a source of primary nationalism. There is only a small fundamental nationalistic awareness or interest in consumer products, corporations, and technology in the WFOC. This kind of participation is known and appreciated within the fraternity but not relevant to its fan base. It was determined that commercialized nationalism has magnificent possibilities subject to massive monetary investments by the public sectors involved. These kinds of contributions can achieve greater successes outside the

US and be more confident in regionalized places like Quebec or impassioned nations like Mexico. In contrast, as previously identified, many of these involved companies and products are American.

The exception to all of this is Ferrari, which has been demonstrated since the inception of the WFOC to be the single largest force of nationalism in the WFOC (more effective than any driver included). The global attractiveness of transplanted Italians and worldwide Ferrari enthusiasts combined, complemented by national Italians, make Ferrari the most powerful entity in terms of omnipotent nationalism and financial value. Multiple responses referred to this phenomenon as a culture and an action of pride. There was total agreement of all interviewed subjects that Ferrari is its best and most powerful example set forth in this chapter. The Chairman, Ecclestone, has a saying, "What's good for Ferrari is good for Formula One" (CNN 2007).

Chapter 7: The North American Equation

This chapter furnishes the research with evidence that North America, primarily the US, is an integral piece of the WFOC puzzle being a globalized industrial sports complex. It substantiates, despite being relatively unknown, that the WFOC foundation of commercialism, culture, and political administrations are demonstrated significantly in North America, which qualifies it as part of its global appeal and underlying basis.

7.1 Criteria Supporting North America

“Although not widely recognized, the USA is the backbone of F1 racing,” 015 (UK, F1 team engineer) told this research, providing an adamant beginning to this chapter of this inquiry. The reasoning behind his comment will become clear as this chapter progress; however this research has validly discovered a multitude of criteria that has established North America as a major player in the WFOC. The research has given an account of North America’s contributions in terms of commercial sponsors, drivers, events, manufacturing suppliers, media correspondence, personnel, teams, and technology that qualifies it as being perhaps the most important geographical expanse outside of Europe as a whole and the UK in particular; although conceivably for some reasons that are often not apparent.

Price Waterhouse Coopers (2014), writing on entertainment/sports, indicates there is plenty to support present sport’s financial impact and an exceptionally strong future: “1) The North America sports market is projected to grow at a CAGR of 4.5 percent across the four segments analysed, from \$56.9 billion in 2013 to \$70.7 billion in 2018, 2) during the period, the revenue gap between media rights and the industry’s largest segment, gate revenues, is projected to close to within \$500 million (2%) by 2018, and 3) within this environment, the gate revenue (CAGR 2.6%) and merchandise (CAGR 1.4%) segments continue to show respective signs of relative maturity, each with

mitigating factors to future growth and the need for further innovation, while the segments of media rights (CAGR of 9.1%) and sponsorship (CAGR 4.8%) continue to realize the increased valuation of sports content by media companies and brand marketers through new inventory and the runoff of prior generation deals” (Price Waterhouse Coopers, 2014).

7.1.1 The Marketplace

Numerous observations from the research remarked that the US is the largest per capita market in the world; thus the WFOC cannot assert being a genuine world championship without it, nor can it be disregarded. 024 (USA, FIA official) found immediate and enormous agreement in this belief, stating, “As a percentage of the twenty-race series, the US represents only 5% of the events. However, as the largest sports and media market in the world, no series could claim global status without it”.

Fort (2003) argues major reasons differentiating North America from Europe and other continents include its “fans, sports organizations, and team objectives”, which of course carries over into other sporting events such as the WFOC.

Keith Duesenberg is a former principal of a team in the Formula Three category whose family was once a prominent automaker, and he adds even further thought to this theory, “It is imperative that North America, especially Canada and the United States, host an F1 event because of the economic effect, high profile, and tremendous media coverage that F1 garners globally. North America is an ideal host and great investment for this multi-billion dollar sport. As the world’s largest automotive market, along with having the ideal F1 demographics, North America offers a rich major merchandising environment that provides a return on investment for the sponsors. F1 not only has won hundreds of thousands of millions of fans around the world, it also reaches a TV audience of over fifty billion. It would be ludicrous for F1 to ignore the importance of North America as a F1 marketplace.” It is hard to argue against the theory that North America is a desirable marketplace for the WFOC.

Those interviewed failed to mention that metropolitan Mexico City, the historical host of the Mexican Grand Prix, is the 10th most populated city in the world with over 19 million people. The US ranks as the third most populated nation in the world. And, Mexico is 11th and Canada is 37th, all adding credence that North America, per se, is a colossal marketplace (worldatlas 2013).

7.1.2 Participating History

While Gorn and Goldstein (1993) found it difficult to locate a place for Formula One in their chronicle of sports on the North American continent, its history with the WFOC also cannot be denied. The history is long, storied and eloquently statured, as shown in this report. In the modern history of F1, three North Americans, two Americans and one Canadian, have been crowned World Champion. Over 50 drivers from the United States, 13 from Canada, and six from Mexico have participated in WFOC events. There have been at least five American and one Canadian teams racing in F1. At one time, three American teams and a lone Canadian team all raced in the WFOC simultaneously. Through 2015, there have been 52 Canadian, 45 American, and 17 Mexican Grand Prix races. There has been a continuing outpouring of American technical advancements transferred into F1, particularly in the area of aerodynamics and safety. American manufacturers have supplied vital products, particularly in the area of tires and rubber. Finally, North American patrons and sponsors have always been an integral and outstanding component of what the continent has contributed to this global series, and in effect, still does today. This research searched and confirmed these connections and its chronicles dating back to the beginning of Formula One's modern era.

011 (USA, FIA official) was pragmatic: "Oh yes, there's a history here [the US]. Even in Canada and Mexico. There are great drivers and some of the best events too. Nobody can match the Mexicans for festivities. Canada is always well organized. There is a legacy of American, Canadian and Mexican drivers as well. Many of the sponsors of the teams are often the European offices of some large American companies as well. And there are a lot of them. That is often overlooked.

The thing that the average fan does not know is all of the American technology used in Formula One. And there is a lot; especially in the way of safety and materials that can be found in a F1 car. So to answer your question, the United States and North America are very important to F1 in just about any way you can think of”.

7.1.3 Television Penetration and Media

Raney and Jennings (2009) tell us that television is the salvation of world sport and how it is presented will determine its degree of success, citing the World Cup and Super Bowl as examples of terrific television packaging.

Television has been and remains the most important vehicle to produce worldwide growth for the WFOC. *Grand Prix 24/7* (2011) reported a record 527 million people watched the 2010, WFOC with China its biggest market of 121 million viewers, which is only 9% of its population. Italy produced the most viewers in Europe with 6.71 million viewers, followed by Germany with 6.29 million viewers. The BBC estimated, with WFOC races combined with the race weekend forum show, about 9 million viewers in the UK. Only about 5% of the U.S. television market was penetrated. It is presumed a greater percentage reached Canadian and Mexican households, but no statistics were available to assure accuracy; however it is understood to be more impressive than the US (*Grand Prix 24/7* 2011).

Sylt (2013d) says there are indications that WFOC ratings fell slightly in 2011, to about 515 million viewers. The decline is generally attributed to a sharp drop of interest in China to 74.5 million viewers (a 34% downturn). Brazil, as in previous years, had the highest percentage of viewers at 8.9% with a leading total of 85.6 million viewers. The FOG has not published any WFOC global television audience figures since that time. Unconfirmed reports suggest a further decline through the 2014 season.

Despite some decline, ratings remain sound overall, but WFOC has room for improvement and opportunity abounds. Saward (2013a) concludes on this point, “However, the newly-announced three-year deal for Sky rival BT Sport to broadcast the UEFA Champions League and UEFA Europa League from two-

thousand and fifteen through two-thousand and seventeen put things into perspective. BT Sport has paid two hundred and ninety-nine (four hundred and seventy-eight U.S. dollars) million British Pounds per season for the rights. The word is that BT Sport is now looking to grab more of the prized sports content on the market and F1 is likely to be a target” (Saward 2013a).

It is clear that the Formula One Group’s television objective is subscription programming where it can be marketable globally. It plans to use creative and technological advancements, like views from cockpit cameras and multiple screens, to enhance its coverage and gain subscription buyers. This eventually will have a greater appeal to Canadians and Americans based on a more educated audience with available cash on hand for luxury items.

Saward (2013a) confirms this thought, “There is little doubt that the gradual shift towards pay-per-view sport is going to continue. TV companies recognize that the popular sports are the best way to motivate people to purchase subscriptions. At the same time it is also clear that competition will force the prices downwards”.

This idea, in the immediate future, will be more successful in the established markets. Saward adds, “At the moment, in the UK only, a Formula One fan who pays to watch F1 coverage on Sky TV needs to shell out 510 British Pounds (about 815 US dollars) per year for the privilege. The channel boasts viewing figures that are around four hundred and seventy-five thousand, which means that in principle the sport generates around 250 million British Pounds a year for Sky. It is not that simple, of course, but it gives one the idea of the scale of money involved. This is good for Sky, but not good for F1 sponsors, who get fewer eyeballs than they used to when the sport was free-to-air on BBC or ITV. In an effort to minimize that damage, the Formula One group has a deal that allows the BBC to broadcast some races live and highlights packages of the rest. The overall Sky-BBC deal is worth sixty-five (about 104 million US dollars) million British Pounds a year to the sport, which breaks down to forty-five (seventy-two million US dollars) million British Pounds from Sky and twenty (thirty-two million US dollars) million British Pounds from the BBC. The deal runs until two thousand and eighteen and Sky hopes that its numbers will increase in the course of the contract. Free TV in Britain remains far more popular than pay-TV with BBC1 averaging around twenty-eight million a

day, compared to ITV's twenty million. Few Sky programmes rate more than one million viewers a day" (Saward 2013a).

The UK is only the first surge of this subscription TV concept. It is expected similar deals will be adopted (if not already) throughout Western Europe and then outstretched into Asia. All television, cable, network, subscription, is an essential ingredient in the idea of a globalized industrial sports complex because of its reach and frequency abilities to gain audience.

In America, all three major motorsports, NASCAR, Indy Car and Formula One, are televised on network or cable. This is congruous with other World Sport outside the major league sports, giving the sport, overall, significant coverage leading to outstanding competitive placement.

Saward (2013a) notes the television growth in the US of other major motorsports which are competition for Formula One in North America, "This is good news for the sport, but one must not forget that at the moment F1 still only generates around \$600 million per season from all global TV rights, despite having more than 300 million live TV viewers per race. NASCAR, the US stock car series, has recently agreed TV deals that will keep the sport funded until 2024. Fox is paying \$2.4 billion for an eight-year deal that runs from 2015-2022 and includes half the races, while NBC is paying \$4.4 billion for a 2015-2024 deal for the other events. This means that the combined worth of the two deals is around \$700 million per year, without taking into account any international TV sales. The average viewing figures of NASCAR have slipped in recent times from around 4.8 million viewers per race". He feels optimistic about potential F1 television growth in North America and particularly in the US, "This is one of the reasons that Formula One group is so keen to make an impact in the US, where television stations pay out much more for sports rights. At the same time the increasing connectivity in the world offers Formula One the opportunity to perhaps one day deal directly with consumers and take out the middle men. It does not take a rocket scientist to work out that with just twenty percent of the current live audience, a twenty race calendar and a five dollar flat fee per race, the sport could generate six billion dollars a year, which is ten times the figure being made today – and that would be without adding in any revenues that might be generated with advertising". Saward probably thinks

of Canada, Mexico, and the US as the established markets he talks about because of its longevity in those places and not necessarily the total exposures.

The important significance is that F1 has begun to penetrate the highly competitive television market in the US, which complements existing coverage in Canada and Mexico. Furthermore, there is increased coverage in all other aspects of media, especially daily newspapers and other specialized publications. While F1 may concede two points: 1) its coverage is not 'on par' with major league sports, and some other sports, and 2) and there is a need for improvement, it is enjoying its greatest extent of its coverage in North America and quickly capitalizing on growth opportunities presented. For now, television coverage is more accessible in Canada and Mexico because the stations are more available to its public. In retrospect, American coverage is curbed to a single cable station; however, this channel, NBC Sports, has provided expanded coverage and continued growth in this early association.

7.1.4 Suppliers of Technology

Overall, despite worldwide growth and particularly from Asia, Youtie, Shapira, and Porter (2008) attest, "The US still maintains a strongly dominant position" as a supplier of technology followed by the EU nations. It is apparent that there is a presence of North American technology in the WFOC by endorsements within its fraternity.

015 (UK, F1 team engineer) told this research that the US is the backbone of Formula One because of its contributions in the area of supplied technology, "The United States most definitely weighs in as a support role in technologies and more especially in materials. Similarly the antonymous divisions of US major corporations support F1 with their marketing budgets. For example, Mobil One from Exxon, etcetera". Here, he confirmed his comment and the beginning of the chapter about the US being the mainstay of the WFOC. His unconditional remark also endorses technology as superior input to other criteria found in this research.

In fact, technology may be the greatest beneficence from North America, again mainly the US, to Formula One. Unfortunately these contributions are often hidden or ignored and, despite the overall importance to the sport, sufficient credit

is not applied or recognized by the audience. Hidden or ignored, 015 would agree in its totality.

However, the supplied technology is appreciated by the fraternity at large: “In short, F1 as we know it would not exist as we know it without the technologies from the USA, and Mr Ecclestone should be deferential to that, and in some ways I think he is, but the hardnosed businessman precludes him from directly acknowledging that,” concluded 015. This is an intriguing comment because it suggests, in a protective way, there could be an intentional lack of acknowledgement of these inputs.

7.1.5 Corporate Sponsors

The easiest way for the masses to witness the vast number of North American companies that participate in F1 as a corporate sponsor is a walk down pit lane. In any given season, up to one hundred companies, mostly American, sponsor either directly or through a European subsidiary a team in a major or minor capacity.

Bitz and d’Astous (1995) find that corporate sponsorships can have a “positive impact on perceptions of the sponsor’s image” with the consumer. This effect can exist despite the link between the sponsor and the event has a non-linear effect on corporate image. This is often the case with sponsorships of events and teams in the WFOC.

Furthermore, 015 (UK, F1 team engineer) believes there is now a clear-cut chance for American companies to have greater repercussions on the sport: “There has always been an influx of American companies that sponsored F1. In the past Marlboro, and other tobacco companies were always heavily involved. However these considerable budgets that are supplied to various teams are not leveraged in any great extent within the US through supporting a US driver into a symbol of national identity and brand awareness. This is an enduring mystery to me. A classic example to me is Red Bull whose name is quite synonymous with beverages in the USA but with a more edgy brand, market segment demographic. It was once cool to drink Coke as a classic US beverage as a mixer to an alcoholic drink, like for example Rum and Coke. But Red Bull has supplanted that in the younger

generation's mind so much so that Coke and Pepsi has had to develop its own edgy brands in response such as a Coke 'burn' drink and there has been a rumour that they are considering F1 as a marketing vehicle, literally and figuratively. But this might be considered 'a day late and a dollar short' in the marketing world".

"North America, and the US particularly, are the most competitive countries for spendable sports dollars," Keith Duesenberg further told this research. "And for many of these American companies Formula One makes lots of sense. The North American consumer has so many options, but it is a market that can't ever be ignored. The F1 presence in North America offers awareness, perception and image. F1 also reinforces, expands and opens new opportunities with added value that can maximize current relationships as well as build new ones, or even challenge and eclipse the competition in the industry". Duesenberg spoke to this research in an individual capacity, not as a numbered expert.

Corporate sponsorship from North America in F1 is not an illusion or a wish. It exists, but often the identification with its homeland is not always recollected because of how trans-national corporations are perceived in today's globalized world.

The best way to evaluate the effectiveness of commercial involvement is the success of those sponsoring in the WFOC. Enrique Arribas heads Banco Santander's advertising and sponsorships department and judges the banks involvement as 'amazingly successful'. "We get a return of five Euros for every Euro we invest in Formula One, just in terms of brand exposure. As you can see, the Santander logo is everywhere – on the car, team-wear, and motor-home". Santander has recently moved into the American marketplace with bank locations in heavily Hispanic areas like Florida (Sports Business Daily 2013).

No doubt, results mark achievement and the WFOC is able to consistently bring about success with the consumer market. Arribas, citing testimony of WFOC sponsorship accomplishment, said that Santander's previous sponsorship with the McLaren team, using that team's assets only, increased awareness in the United Kingdom by 20% to 92% in three years. Such huge progression reflects a phenomenal result for any company seeking reach and frequency in the marketplace. This is something Santander will consider along with its American growth.

Ferrari's chief of Motor Sport Communication Renato Bisignani noted that Ferrari currently has 23 big name corporate sponsors, further confirming Formula One as a destination for commercial global advertising and marketing because of its immense ability to gain exposure that translates into sales. Again, the US is Ferrari's largest sales market. Often, even sometimes required, vendors to these manufacturers are invited to partake in these sponsorship opportunities as a way to do or continue to do business (Sports Business Daily 2013).

There are doubters, as 018 (BEL, F1 driver) weighed in, "For my opinion, Formula One today is very complex, probably too complex, and much too expensive considering today's worldwide economy. But there is no arguing it gets results for its sponsors". Results are the objective of any business plan and, although complex and expensive, 018's comment seems to guarantee there are fruits of sponsorship but with a heavy cost to pay. 018 concluded that "regardless corporate sponsors must always consider North America, and especially the United States, because it is the largest market in the world."

7.2. The Struggle for Entry into North America

China, which already hosts a WFOC event, is promoting several of its young drivers as future Formula One drivers. Some of these efforts are tied in with the new Chinese car makers that yearn to enter the North American market. Speaking to Colum Murphy of the Wall Street Journal (2014), Chinese auto executive Wang Shunsheng says, "After initial strides into mature markets several auto makers learned first-hand how difficult it is to penetrate from a regulatory standpoint, let alone having a competitive product". Indeed, the Chinese products are considered rather "subscale", making the challenge very difficult to go international. Murphy continues, "Bill Russo, president of auto consulting firm Synergistics Ltd., said establishing a US market presence requires considerably deep pockets—something few privately owned Chinese companies have". Russo adds, "I know no case of a company coming from a highly fragmented home market such as China succeeding at going global". Several Chinese auto manufacturers have attempted to enter the market but have meet with dismal results (Murphy 2014).

Jim Worrell is the president of a company called AmeriStart, which specializes in assisting foreign companies enter the American marketplace. He utilizes a promotional piece called 'How to Win the Olympics of Business' to help overseas executives better understand the demands. He outlines eight points for concerning executives to appreciate the market: 1) Americanize your marketing materials, 2) know your competitors, 3) have a focused database, 4) be visible, 5) be social, 6) sell business impact, 7) be different, and 8) be patient and persistent. He says it takes time to build your product in the USA because the market size is gigantic (Worrell 2014).

While the WFOC has enjoyed some success in North America, it can be said its lack of success is self-inflicted. What we have learned in this research is that the FOG does not always follow this type of plan: 1) the WFOC instils one marketing mentality and it is their way only, thus they do not customize its brand for America, 2) the WFOC dismisses the 'major league' sports, NASCAR, and Indy-car as its competition in this market, 3) its focus and visibility is limited in this market because of an absence of commitment, 4) it is not a social environment but one that is rather arrogant and aloof towards the market, 5) it has no coherent business plan for the continent, 6) and although different, it is neither patient or persistent. The latter refers to the lack of use of American and Canadian drivers and the willingness to give up races easily in all three countries at one time or another. It takes an enormous amount of money for a driver to progress into F1 and North American drivers find good opportunities on their home continent without relocating to Europe for the formative stages. In Baime's article (2014), Mario Andretti says, "In the United States you can own a team by being in Indy Car or NASCAR. These are very prominent championships. And that's why drivers and team owners can have a very satisfactory career by staying here without ever having a passport". The WFOC approach is simple: 1) pay the fees for the event, 2) follow the rules and regulations of the FIA and FOG, and 3) the promoter is solely responsible for its expenses and promotion. This leads to little incentive for a promoter to accept the terms of an event and the ability to earn a reasonable profit. Lastly, any North American team is forced to station in Europe, or at the very least, set up a satellite base to operate efficiently. There is an agreement from those in racing communities outside the WFOC that it has no desire to learn the market and has

adopted a take it or leave it attitude. This is a plan that does not bode well with its acknowledgement that the market is both essential and desirable. Many believe the WFOC has out-priced itself with commercial sponsors, drivers, events and teams because of its perspective and will always struggle to reach maximum fulfilment in North America.

7.2.1 North American Detractors

Not everyone agrees on the importance North America has in the WFOC or vice versa. There are detractors and 003 (USA, journalist), the motorsport writer and business consultant, falls into the minority of those acquainted with the business and the sport: “Based upon the unique economic aspects of the Formula One enterprise, as I identified herein, North America has virtually no input. For that matter, no country has any effective input into the enterprise model”.

003 considers the WFOC as a travelling act that does have positive regional intangibles but not necessarily a global impact: “That said, a Formula One event can generate pride and a sense of accomplishment for an area and or region, in the initial years of a venue. For the Formula One participants, however, it is just another stop on the Formula One ‘circus’ tour”.

Some may agree with him in this assessment that North America has a minimal influence on F1. This is notably because of the competition and size of North America as a marketplace for the WFOC to strive in, thus producing a small group of detractors.

However, the general findings of this research differ and are in accord with 011 (USA, FIA executive). “Oh well, you are always going to have detractors. Some are just jealous and some don’t know. So be it. However facts don’t lie (the old adage again) and you can see North America almost everywhere in Formula One if you know where it is or intentionally look for it”.

7.2.2 The Politics of WFOC Development in North America

The FOG and its network of clandestine operational groups are the envy of not only other world sports but any business. It has consistently posted a 50% plus profit in its modern era. It has a sincere desire to establish and succeed in North America. However, the research gained the sense that 1) the FOG is reluctant to invest its own monies in North America, and 2) the FOG is not willing to negotiate with the North American promoters to afford them an opportunity to profit.

011 (USA, FIA executive), added credence to this: "F1 is self-sustaining by virtue of the fact that it generates over \$1 billion in revenue annually and retains over 50% margins in that revenue stream and is a global media property broadcasted in over fifty countries". The FOG certainly has the financial ability to assist North American promoters and sponsors for an easy entry into the business side of the sport.

Keith Duesenberg likened the historical value to a foundation in development. He used his family history as a cornerstone to his Formula Three effort, rightfully named Duesenberg Racing, Formula Three being a forerunner to Formula One. "Historically it should be known that our family won the 1921 French Grand Prix and it was the only US win until the 60s. This remains one of the proudest achievements in American racing. I understand business and F1". Duesenberg, noting the positional strength of the WFOC organization, continued, "As one of the only truly global professional sports, Formula One caters to its consumers and corporate supporters on a unique level. F1 drives awareness, consumption and loyalty specific to and for corporate business. F1 is the premier global motorsport event that covers: Eastern and Western Europe, Asia, Mid-East, Australia and North and South America. With coverage of about 80% of the world's population, F1 reaches the world's most established and largest emerging markets. F1 events bring not only its benchmark of branding to the host country but it showcases the technology of all of the corporate participants associated with the teams and F1. It is a sport where country dignitaries, government leaders and ministers can shine the spotlight on their city and country to the other 195 countries, other world leaders, captains of industry, celebrities, the current who's-who, and of course to the citizens of their country. As the world continues to meld and shrink,

securing a F1 event and being on the schedule requires a circuit and facility that is second to none. Once selected, your country is now one of the nineteen events that decide the coveted World Championship. Nice bragging rights for any country, government and company". As a businessman, Duesenberg said the WFOC can rightfully be successful in North America if FOG would educate itself about market differences and be more amicable with its contracts.

The best endorsement of the administrative strength of the WFOC was blogged by Joe Saward (2013b), "The apologists for the Formula One group [not Formula One Group] have been busy this week saying that the F1 teams have enjoyed a significant gain in revenues in the most recent financial returns. This is true, but in the finest traditions of propagandists, it is not the full story. The numbers being used involve only one of the Formula One companies: Delta Two. They fail to include the proceeds that are generated by other arms of the business. Delta Two's parent is called Alpha Topco and it is also the parent company of a string of businesses which use other letters from the Greek alphabet: Beta, Gamma, Epsilon and Omega. The group's ultimate holding companies (Alpha Topco and its parent Delta Topco) are headquartered in Jersey and do not have published accounts. Beta, Gamma, Epsilon and Omega divisions include the revenues from Allsport Management, GP Two and GP Three. Allsport Management looks after F1's trackside signage, VIP hospitality and official supplier programs and so there are significant revenues from these which the teams do not get a share from. In overall terms this means that they do not get more than fifty percent of the money generated by the sport. They still get good money, but it is nothing compared to the piles of cash that CVC has been spiriting out of the sport in recent years. It is reckoned that the investment company has gained more than two billion dollars in the last couple of years, reducing its stake from sixty-three percent to its current thirty-five, and the accounts reveal that CVC recently took eight hundred and sixty-five million dollars in dividends for the last two years. The firm has also borrowed against future earnings and owes two point two billion dollars to banks. As I have said many times: Formula One is a cash cow that is being milked on an industrial scale" (Saward 2013b).

The people who run the WFOC have control and have out-duelled their own associated bed-fellow the FIA in terms of financial return. Saward adds, "When one

considers these figures it is clear that the FIA's decision to lease the commercial rights to the sport for one-hundred years for three hundred million dollars, back in two thousand and one, was not one that the FIA can be proud of. It was easier to do that than to build its own commercial structures, but the federation did not have much foresight and the goal of the organization should now be to find a way to bring all this money back into the sport and grow motor racing and mobility around the world. The recently completed FIA-Formula One deal raises the FIA's take from around twenty-four million dollars a year to thirty-nine million dollars, but this is peanuts. The federation has been offered the opportunity to buy one percent of the shares of Delta Topco if there is a flotation. The price of these shares will be a fraction of their market value and the FIA will only be allowed to sell them when CVC Capital Partners sells its shares. This is smart thinking by Bernie Ecclestone as it will mean that the FIA will henceforth support a flotation, although listing the F1 business is really not what is best for the sport. A one percent share in the Formula One Group is worth anything between thirty million dollars and one-hundred million dollars depending on the valuation one gives the business”.

If there is any doubt that the WFOC administration is not a well-oiled, money-making conglomerate stronger than its Mega Sport companions, Saward compares it with a particular other Mega Sport: “A comparison with the International Olympic Committee (IOC) is interesting. The IOC runs its own commercial operations and is reckoned to have earned five billion dollars in the four years between two thousand and nine and two thousand and twelve. Ninety percent of this money has been distributed to organizations in the Olympic Movement to support the staging of the Olympic Games and to promote the worldwide development of sport. The IOC keeps less than 10 percent for operational and administrative costs”.

Even the new agreement between the WFOC and the FIA demonstrates its command of its operators: “Over the term of the deal that has just been agreed with Formula One, the FIA will get around three hundred and seventy-five million dollars. If there was no middle man and a structure similar to that of the IOC the FIA would be getting one point six billion dollars, based on current earnings - without any growth. It is quite a difference. The FIA has looked at ways in which it might be possible to terminate the one hundred year deal but that would require a

breach in the terms of the deal by the Formula One group. The only other option would be for the FIA to create an independent trust-like structure to buy the rights back by borrowing money against future earnings (as CVC Capital Partners has done). This entity would need to have an operational subsidiary to do all the deals. This has to be a better idea than the current situation in which financiers take every penny they can get” (Saward 2013b).

018 (BEL, F1 driver) had an interesting opinion about the infallibility of the FOC. “Formula One is too strong,” meaning the WFOC administration. He is a former Formula One driver and now vice president of the Grand Prix Driver’s Committee with a keen knowledge because he drove for the team Ecclestone once owned. “One person makes all the money. It’s not fair. The teams are the show”.

A stark indicator of any sports franchise is its value. Currently there are 11 WFOC teams and each has an estimated value of at least \$200 million; some probably twice that amount or more. Two WFOC teams are listed in the Top 50 of all world sports, as previously discussed: Ferrari fell from 13th in 2011, to 21st in 2013; however its value increased from \$1.07 billion to \$1.15 billion in the same period, and the McLaren Group’s F1 team fell from 36th in 2011, to 47th in 2013, with a value of \$800 million.

7.3 Summary and Conclusions

The consensus of the interviews conducted in this research would strongly indicate that North America is a major ‘player’ in the WFOC and as a component of its industrial sports complex. The extent of its relevance may vary by personal opinion or visibility (or lack of) but it is clear that the majority of professionals found agreement on this judgement.

018 (BEL, F1 driver) strongly believes the American model may be the correct path for the WFOC to follow: “America has lots of ideas for Formula One. From my point of view American rules [for Indy-car racing] are easy to accept because of its simplification. American technology is exceptional but in US racing they limit their own technology in order to produce a better show. Rules in American racing are more stable too, as the rules do not change often. The cars make big

noise. This is what the spectator wants and makes TV a better spectacle. For me America already makes big things happen in Formula One and can make it even better. It's the right choice”.

In this final analysis of North American relevance, it can be said that there are many moving parts that will determine the level of importance. Culturally, Mexico and Canada are more involved than the US. Most, if not all, technology that stems from North America originates from the US. Commercial involvement is generated from all three countries. And all of these arrangements are fluid and can change mid-season, before a season, after a season, or virtually any time. The passion found in Mexico and parts of Canada are highly visible; while American technology is apparent but it is difficult for many to locate the precise source. In this world of trans-national corporations, it is arduous to identify many of the commercialized sponsors as American, Canadian, or Mexican. However, in the end, this research has illustrated that all of the components are there to successfully conclude that North America is not only relevant to the WFOC and its position as a globalized industrial sports complex, but an influential and major contributor in every imaginable facet.

Fact is, North America matters in two key areas; conveniently put: as a market and as the supplier.

Chapter 8: Conclusion

This chapter brings about a final determination of the research by reviewing its immediate position, verifying its past and present situation, and predicting its sustainability of North American significance in the WFOC as a globalized industrial sports complex.

8.1 The Present

There is little, if any, doubt that there very much is a North American equation in the WFOC. The difficulty that exists is its consistency as a viable component of the championship and its measure of strength. Beginning in 2015, for the first time in decades, all three major nations will host an event. This is astounding because well-established, traditional races at France and Germany have been scrapped; although Germany was reinstated in 2016. Mexico finds itself in the unlikely position of having two WFOC drivers at the moment, both well sponsored by Mexican corporations aiming to capitalize on this re-born hysteria. This is compared to Canada and the US that yearn for a driver; although the US has a F1 test driver. Beginning in 2016, the United States is represented by a WFOC team with its base located in the United States (more in section 8.2). While Canada has some minimal software interests in the series, the WFOC is entrenched in corporate sponsorship and technical partnerships from the US. Chart 8 highlights the present North American participation levels in terms of drivers, events, teams and commercial support.

Chart 8: Present North American WFOC Penetration

Nation	Drivers	Events	Teams	Commercial Support
Canada	0	1	0	<ol style="list-style-type: none">1. Event sponsorship2. Limited software support
Mexico	2	1	0	<ol style="list-style-type: none">1. Driver sponsorship2. Event sponsorship3. Team sponsorship
United States	0	1	0	<ol style="list-style-type: none">1. Event sponsorship2. Large technical support3. Team sponsorships

Note: Start of the 2015 WFOC season

8.1.1 A Globalized Industrial Sports Complex?

There is no formal definition for a globalized industrial sports complex, however, but according to Harvey, Rail, and Thibault (1996), there is a worldwide demand for what sport offers, in “that globalization transforms sport by inducing trends of homogenization as well as national diversity; sport also contributes to globalization in that it is a vehicle for global mass consumption culture”. In effect, this is what the sports industry manufactures; the product that is desired by its market.

In the case of the WFOC, we have a sport product with mass appeal that requires a whole industry to produce. As we discussed, it is a secretive company, a monopoly, an oligopoly, and more but, by its own definition, it is an industrial sports complex that relies heavily on North America for its existence. The research cultivated the understanding of Joe Saward’s statement from the beginning: “The financial details of the sport are not easy to find and tend to be shrouded in unnecessary mystery”. Indeed, what we generically label as the WFOC in this study is actually controlled and managed by the FOG and its partners, subsidiaries, and holding companies. These entities are then difficult to pierce, making this a challenging thesis. The upper echelon of the WFOC is indeed a highly secret society that masterminds and controls this industrial sports complex (Saward 2013c).

Saward is absolutely correct in his above assessment, however he may have made a partial error when he talked about the teams being an inferior component of the WFOC: “There is only one possible conclusion when one looks at the Formula 1 teams: they are not very good businessmen. They use all their energy to spend all that they earn, and more, in order to win. In doing so, they burn through indecent amounts of money, which simply serve to cast the sport in a poor light. The problem, of course, is that self-interest comes before everything else and means that they are always being divided and conquered, notably by Bernie Ecclestone, who has built an impressive empire on the teams' inability to work together”. It is probable that these very same people can relate this all to an industrial sports complex if asked, because they are the components that comprise it like, the movements of a Swiss watch (Saward 2013c).

In the end, first and foremost, the simple fact is the WFOC is a monopoly and a monopoly is designed to be profitable for its owner, producer, or in this case, its emperor. And, the emperor is Ecclestone and his designated array of investors. There is little argument that his monopoly works in every capacity discussed in this thesis. The WFOC is beyond successful. It may very well be the most extraordinary entity in all sport.

Second, the teams, and then the technology partners, commercial sponsors, and other participants play to his captured audience complicated with cultural intangibles that come together to configure a restricted oligopoly of sorts. And, as this research has presented and proved, this monopoly and its oligopoly come further together to shape an economic structure that is a globalized industrial sports complex. Finally, this research further queried and verified the significant input by North America as an integral geo-cultural, geo-economic, geo-industrial, geo-political, and geo-social partner in the quest of the WFOC to be a Mega World Sport.

This is what the WFOC is as both a business and sport uniquely under one global umbrella. It would be correct to define this single global umbrella as an industrial sports complex composed of the three main elements we studied: 1) its administration and politics, 2) its commercialization including technology, and 3) its culture and national identity. It is important to mention here that the teams and its support industries are part of its technology.

“Formula One is unique in both sports and general industry for being a singular global enterprise,” said 033 (UK, F1 driver). He literally confirmed to this research that he believed the WFOC is its own globalized industrial sports complex.

003 (USA, journalist) gave his own definition by providing a detailed chart of his own design to support his theory in regards to the WFOC being a globalized industrial sports complex of its own consequence:

- “1) There is no seasonality. The season extends from March to November, and the races are staged in conditions from extreme heat to extreme precipitation.
- 2) Events are short. Amongst all sporting events, Formula One is the shortest, requiring a time commitment from a TV viewer of less than two hours.

- 3) There is no market saturation. Unlike other professional sports, there is a limit on the number of Formula One events (only 20 races). For decades it was in the range of 15-17 events; the series organizer has publicly stated that it wishes to go up to 22 races per year. Significantly, the series is not every week; it is still somewhat special. Tennis and or golf have events every week throughout the world. Beyond the 'majors', an individual event is no longer special. That said, Formula One may lose its appeal, if the series extends beyond 20 races.
- 4) There is a disparate distribution. Formula One races are in distinct parts of the world. Similar to golf and tennis, the series is chasing international distribution. The series has eclipsed the need to appear at iconic, historic venues.
- 5) There is worldwide appeal. The television audience of Formula One is worldwide. While many motorsports national racing series have races that may compete against a Formula One race time-wise, and their national TV ratings may be comparable (or even superior) in the local market, upon a global basis, Formula One trumps all.
- 6) There is no competitor. The only motorsport 'comparable' to Formula One is MotoGP. Like Formula One, MotoGP is a motorsports globalized industrial sports complex, the business model being very similar to Formula One. For whatever reason, the appeal of MotoGP is a fraction of Formula One. Historically, that has always been the case, even though the basic business tenets have been the same. Indeed, the former owner of MotoGP is the current owner of Formula One.
- 7) It has dual superstars: In Formula One there are two sets of stars – the drivers and the automotive marquees. Almost every Formula One has a favourite driver, but a sizeable number also relate to world automotive marquee. Many fans are also adherents to Ferrari, and to a lesser extent, McLaren, Mercedes, Sauber, etc.
- 8) It is a global championship. Be it stick-and-ball sports or individualized sports such as golf or tennis, there is no annual, global championship. While some competitions are captioned as 'World Championship', they are not accepted as being global by fans. F1 is a real 'World Championship'.
- 9) It is self-contained. Unlike any other sport or entertainment property, Formula One is entirely self-contained. Every venue has to have identical dimensions relative to the pits (garage area). The Paddock Club (the elite viewing experience)

is the same from venue to venue, to the extent that the crockery and cutlery are the same. The television production organization is the same from race to race, with much of the equipment being the same; the key personnel are the same”.

011 (USA, FIA official) charged in with agreement: “The Formula One Group is no different than any other large company. There’s upper management, and all the departments you would need to be self-contained: marketing, public relations, sales, technology. The teams also are self-sustaining in this same exact way. And there’s a whole cottage industry behind it that can do whatever can’t be handled in-house or what they may want to farm out”.

To better understand this idea more accurately, the separation of the Formula Group and the teams, research asked 011 if the F1 administration is a regulatory agency for the teams. He responded, “Oh no, that would be the FIA. The Formula One Group is more like the corporate headquarters and the teams are more like satellite companies. Of course all of these teams and other involved companies are individually owned and operated but there are these connections that seem like this is a huge global syndicate”.

When asked if the WFOC is an industrial sports complex, he responded sharply, “Yes it is because it is a sport, a business and an industry that manufactures what it needs”. 011’s comments would strongly suggest agreement with the findings of this research.

“I guess it is in many ways F1 is a global industrial sports complex of its own and in others it isn’t,” concluded 015 (UK, F1 team engineer). “For example, there are not many global sports that ship all their equipment and fuel to each venue they compete at. The Olympics comes to mind for show jumping, kayaking, shooting, and on and on. There is also ocean-going yacht racing. But these are not weekly or monthly events. Other forms of motorsport also do this with WTC and especially rallying. It is not often that a soccer team takes its own food, we will call fuel, with it, and although I am sure it has been done on certain rare occasions. Often however one has to use the local resources, and trust them also. This brings economic benefit to a country or venue, which gets returned to the local economy as visitors from abroad visit the event along with other service personnel such as journalists. However this cannot make up for the huge cost of staging a yearly event which then makes the argument more about prestige rather than economic

benefit. F1 certainly has a large benefit to the economies of the countries where the host teams are based as many jobs support F1 and the trickle down to other manufacturers in lower classes”.

O15 added his thought on related historical global associations, “The biggest challenge to Formula One is ‘to be relevant’ (globally in today’s world) given that it is positioned at the esoteric end of automotive technology. That used to mean utilizing the best materials that could be obtained whether they be natural or increasingly synthetic man-made types. Things that come to mind in the 80s and 90s were toluene for fuels which have highly toxic values and bear more than a passing resemblance to T-Stoff and C-Stoff of German World War II rocket planes, both highly reactive. However toluene is more akin to TNT as one of the T’s active ingredient is toluene. The F1 thinking was in a similar vein by packing more bang in the form of energy to create engine power. Similarly carbon fibre and other man-made materials from the aerospace industry were and still are being readily utilized. However neither of these aerospace derived materials has made their way to widespread automotive use so far, for a variety of reasons, although carbon fibre does have some limited applications. These man-made materials, or highly refined natural materials such as titanium, come at a high price due to their scarcity in the Earth’s crust or the difficulty of extracting them”.

He persisted into the last decade of F1, “In the early 2000s, the governing body, the FIA, made a conscious decision to limit the use of such materials, but not to any real great effect, as budgets in F1 kept growing, as did the interest in F1, so funding was not becoming an issue for the teams, and the OEM manufacturers also justified the use of these materials mainly through their own research and development budgets, adding to the marketing budgets that F1 monies usually came from. Formula 1 has only recently enacted, although it has been in discussion for some years, the engineering change in direction to the social, economic and environmental conditions, mainly at the behest of the OEMs feeling pressure from the consumers. These financial pressures show up in the attendance and viewership figures of recent years, with F1’s ability to use itself as a tool for marketing and advertising due to ‘relevance’ which are functions of the first two aforementioned criteria. This year sees the new engine rules enacted whereby a more serious effort is placed on being more socially responsible by using or reusing

the kinetic energy of the on-board fuel through turbo charging and KERS energy recovery systems. This is in direct response to the consumer wishing to see the sport at its highest level be sensitive to the environmental pressures all around us. This perspective is often trotted out, when fuel usage and emissions are in discussions”. The research gathered that this was an engineer’s way to translate, in more technical terms, the obvious influence projecting the WFOC as a global industrial sports complex in these stipulations.

018 (BEL, F1 driver) also suggested the world audience seeks a sport that is at the loftiest level possible, “Today, F1 technology is at a very high grade to be transferred into the everyday cars we drive but the main market around the world is a popular car easy to drive and repair with not too much electronics that can break. Look at Central America, South America, Africa, Asia, and Russia. These are important F1 markets and they suffer poor car service. F1 can do this. Only F1 can do this where its own technology can be transferred into every main market in the world with the cars we drive.” 018 responded with a hearty “yes, for sure it is” when asked if the WFOC is an industrial sports complex. “I would agree that F1 is an industrial sports complex. But for 2014 with new F1 engine rules the budgets will increase and it will be astronomic to run and the transfer of technology may get lost for a while. People want cheap and efficient cars and the industries [race car and consumer automobile manufacturers] must work together in the future to do this.” 018 repeatedly mentioned the importance of the US in markets and technology.

This research has confirmed with the expert opinions of its fraternity within and the cultural community from without with pertinent analysis the theory of the WFOC as an industrial sports complex.

8.1.2 Validating North America

The consensus of the interviews conducted in this research would strongly indicate that North America is a major ‘player’ in the WFOC and as a component of its industrial sports complex. The extent of its relevancy may vary by personal

opinion or visibility (or lack of) but it is clear that the majority of professionals found agreement in this judgement.

“Really you can’t get away from it (North American participation and influences),” said 011 (USA, FIA executive).

Keith Duesenberg had a philosophical impression of this thought: “North America is indeed vital in the pursuit of the F1 World Championship, not only for the drivers, its teams and manufacturers, but it is also holistic, strategic and synergistic for F1.”

In agreeing, 015 (UK, F1 team engineer) explained a different perspective: “The blossoming of F1 for me came not in the vehicles, teams, engineering, or many of the related team or racing activities, it came about from a convergence of the support structures that enabled a worldwide experience of F1. Many of these things came from the United States. For me the Boeing 747 played just as big role being able to ship bigger and more of F1 around the world, team personnel, equipment, and even the entourages that follow F1, so in that respect I would most certainly cast this part of the US industrial complex as having a significant role to play, as well as satellite communications beaming races live into worldwide living rooms on a live basis”.

Clark and Tracey (2003) collected information from various sources on the dynamics of clusters, growth, industrial globalization, innovations, networks, partnerships, regions, and sustainability; all which can verify the North American connection. Their focus was to clarify the evolution of network interaction which can explain how we got from Europe to North America in this equation. They focused on economic performance and competitiveness during the time and places of network interaction with emphasis on two noticeable issues: “(1) the importance of network structure, arguing that innovative activity requires flexibility with regard to network formation. (2) The role of geography in relation to the construction and functioning of alliances. It is the contention here that networks are likely to be increasingly international in scope”. When exercised as actuality, these designs are real and exemplify North America.

Validating North American is not a theory. The breakdown of the research is factual evidence of its input and is undeniable. The vast majority of opinions

accept the reality of North America's presence as a provider of technology, sponsorship, personnel, location of events, and drivers.

8.2 The Future

The future of the WFOC in North America is one of expansion. Already armed with three events on the continent, there has been a protracted effort to bring a second and even a third race event to the US. Canada, Mexico, and the US all have new, long-term contracts securing Grand Prix racing in each country. The desire to have a race in metropolitan New York City is no secret, and these negotiations were ongoing as this research concluded. Las Vegas, San Francisco, and a return to Long Beach (Los Angeles) have all been mentioned as possible second race venues. Such events are plausible but, as indicated in this report, the FOG must address the needs of these markets, including reasonable fees to allow growth.

This academic work has shown that culture and the national identity of a driver is the most powerful form of pride in this series. All three major nations have experienced such phenomena at various points in their history, with only Mexico presently active with drivers. However, all three nations have potential drivers who can join the championship in the coming years. The US has a more immediate future, with one driver in development as a F1 test pilot. Ultimately, to reach the absolute plateau it will be subjected to financial conditions and politics.

Corporations, particularly American firms, supplying technical support will not dissipate anytime soon because there is a demand and always a need for supply. Per se, these companies like their Formula One connections, and should one disappear, there is a perpetual vacuum that will produce a new supplier, most likely an American one.

If there is a weakness it could be found in available sponsorships. Formula One is an expensive advertising endeavour and American companies have an assortment of entertainment and sport marketing alternatives and are more apt to spend their promotional monies at home. The exception to that rule would be a trans-national company with global interests or a personal association. It is unlikely, because of market conditions and size, that Canada or Mexico can partake in the

long term in these areas for those two reasons, although Mexico is currently involved due to personal considerations as opposed to fully marketing based.

The brightest star in the future is the fact a new American team has entered the fray in 2016. Its owner is a successful business man named Gene Haas, who always owns a NASCAR team. Haas, who owns a billion-dollar per year machine tool company, said, "America is a big country. It's a great country. It should have its own Formula One team". His team will be based just outside of Charlotte, North Carolina, with a team shop in the UK. He has already teamed up with the fabled Ferrari team to supply him motors and to act as a sort of secondary team to its factory. The United States is the largest market for Ferrari road cars. The team is well-funded and geared towards success, "I don't care what you are selling, whether it's soda pop or cars. You have to get people to know your brand. When you're doing something like [launching an F1 team], everybody's expecting you to fail. You get notoriety. That's what we really need. I want people to associate Haas Automation as a scrappy young company that can take on the big guys and win. People will say, 'These guys can race friggin' F1 cars, and if they can succeed at that, they must build a hell of a machine tool". He expects to employ 200-300 people in the F1 team and it is conceivable one of his two drivers will be an American. Gene Haas is not related to the late Carl Haas who ran an American F1 team in 1985 sponsored by the American trans-national corporation Beatrice Foods (Baime 2014).

Also, in 2014 a young American driver named Alexander Rossi emerged first as a test driver and in 2015, became a part-time driver in the WFOC. It can be assumed that Rossi has bold expectations. Rossi won the 2016 Indianapolis 500 with Andretti Autosports to raise his value.

It is a safe assumption that there is a future for North America in the WFOC and perhaps one larger than present, based on drivers, events, sponsors, and teams, which are more fluid, but always technology. These demands will always remain, highlighting the opportunity and ability for sustainability for North American growth.

8.2.1 Closing Remarks

Today, ownership in the WFOC is available to anyone through stock shares and mutual funds. The Formula One Group and Waddell and Reed are named in numerous portfolios; including retirement pensions. Torrance (2008) states global assets are moving from public to private at a rapid rate in this sector as investors trend from traditional financial and geographic borders seeking greater returns. This indicates solvency of the WFOC product. Shares of some teams are also available to the public; including Williams and the parent of Ferrari.

Financial adviser James Glassman (2014) included a new book in his library, "To this library, I would add a volume that never uses the word *investing*. It's *The Organized Mind*, by Daniel Levitin, a professor of psychology and behavioural neuroscience at McGill University, In his just-published book, Levitin shows how understanding the way our brains work can help us make better decisions". This caused the researcher, knowing how the WFOC is multi-faceted, to take a look at Levitin's book. Levitin (2014) tells of the importance of physical exercise and sleep to make proper decisions. He highlights multi-tasking and travel as deterrents to assembling good resolutions. That got the researcher thinking, because the WFOC is demanding. It requires a work environment that allows little time for sleep or exercise, multi-tasking is the norm, and extensive travel is required. And, being European-based, even more so for those in North America. The challenge for North American involvement is a huge commitment and is under-appreciated. Whatever accomplishment is made by North America's participation in the WFOC is based on its very passion to share and succeed in a highly competitive industrial sport complex.

North America's continued existence and augmentation is summed up by America's last world champion and racing icon, Mario Andretti, "F1 is like a true world championship. It's like the Olympics. You would have lots of people who would be interested here in this country, people who are not interested now". Andretti is talking about the beneficiaries of having a team (meaning an American team) and how it acts as a North American revolving part of the industrial sports complex that is the World Formula One Championship (Baime 2014).

8.2.2 Final Result

To reach a conclusion, this research first established the linkage between all world sport and the World Formula One Championship with applicable globalization definitions and theory. It identified the pre-eminent features that could prove the applied theories of its research in a logical and well-developed sequence. Its use of literature and a strong structure determined its objective early and its methodology clearly leads through to a predictable conclusion. Several academics advised me that a predictable conclusion is the pathway to a successful research. Therefore, I strived to organize the important factors to reach that objective.

There is an old adage again that facts do not lie. The connected and inter-connected criteria of the essential parts are all well established in this systematic examination to prove its outcome. This research uncovered not only circumstantial evidence but unconditional actuality in all three of the main components of this investigation (commercial, cultural, and political) and all of its underlying sub-components. This resulted in the research accounting for and supporting the main attached theory found in the title that: 1) the World Formula One Championship is its own sustainable industrial sports complex, and 2) North America, as an abstract geographical player, performs an integral role in the World Formula One Championship's ability to be a sustainable industrial sports complex, considering its activity with the three main components and sub-components.

In the end, we reverted back to the three original questions in sub-section 1.4 of the research by responding to and defending accordingly:

1. Whereas we clearly identified the WFOC as one of three elusive Mega Sports in the world and characterized it as an industrial sports complex by the organized and connected commercial, cultural, and political components it is comprised of. These three factors are almost exclusively found in the characteristics of a Mega Sport opposed to any other world sport; which may or may not contain all three elements and but certainly not to the extent of a Mega Sport. In this case, the WFOC overwhelmingly makes the argument it is in the Mega Sport category and these elements becomes the backbone of this research and provided the empirical data to prove its significance in the three areas identified here and the sub-categories of each as well; in

particularly in technology as part of the globalized commercial aspect which raises the bar of a Mega Sport.

2. Whereas those same commercial, cultural, and political components that are found in the WFOC were dissected to understand their make-up and how they exactly act in the theatre of a globalized industrial sports complex. This was accomplished largely by interviewing real experts in each field and supported by a host of other important material. These experts represented precise subject and not a broad spectrum. This kind of specialized breakdown of information provided the nitty-gritty that is essential to accept this thesis as gospel truth and detailed as much as possible to prove its existence and complexity.
3. Legitimizing the connection between the WFOC and North America is a challenging task because it is mostly ignored. However, when the commercial, cultural, and political structures are systematically presented it becomes impossible to deny the WFOC's intricate relationship with North America. The technological advancements from North America to the WFOC alone make a plausible argument however the combined commercial, cultural and political mutual contributions and complications provide inundated actuality and a relationship in existence. The facts presented in this scenario are striking and validates this often disregarded link.

Thus, the World Formula One Championship and North America is a legitimate globalized industrial sports complex in part and in whole.

8.2.3 Epilogue

After this thesis was submitted and approved, on September 7, 2016, it was reported by multiple sources, including Forbes, Fortune, and The Guardian, that a major interest and eventually controlling interest of the WFOC was sold to the Liberty Media Corporation for \$8.4 billion. Liberty Media is owned by American billionaire John Malone. Mercedes motorsport boss Toto Wolff immediately commented that the WFOC can learn some new innovative business practices by adopting 'the American way' (2016). Ecclestone will continue to own about 14%

but the WFOC will essentially be American owned going forward. In the short term, Ecclestone was to remain its CEO for the immediate future with Chase Carey, an American executive, its chairman. Ecclestone's long term future with the WFOC remains less clear. A division of Liberty Media also owns the FIA's Formula E Championship; the new global electric race car series.

Just days prior, a substantiated rumour suggested Lance Stroll, son of Canadian fashion billionaire Lawrence Stroll, would sign to drive for the Williams team in 2017. Stroll would be the third active North American driver in the WFOC. American Alexander Rossi is likely to remain a test driver for the Manor team.

Later in 2016, another gigantic but unsubstantiated rumour took shape that the American multi-national Apple was interested in acquiring the McLaren Technology Group which includes McLaren Cars and its Formula One race team.

Referring back to the Liberty Media buy, former F1 star Gerhard Berger said, "The new owner is typically American which means (they are) straightforward. So there will be no more endless discussion" (2016). One example can be in marketing where the WFOC employs a mere three people. By comparison, America's National Football League (NFL) employs 75 people for the same type of department.

These developments make for a fitting end why North America matters, and will continue to matter to the WFOC industrial sports complex.

Appendices

Appendix I: List of Global (world) Sports

Appendix II: Montreal Questionnaire

Appendix III: Austin Questionnaire

Appendix IV: Expert Interviewee Schedule

Appendix V: Montreal Questionnaire Results

Appendix VI: Austin Questionnaire Results

Appendix I: List of Global (world) Sports

This research reviewed most sports played throughout the world in its attempt to consider what may be inclusive to the terms world sports or World Sport. World sports may or may not include the following (Top End Sports 2013b):

Alpine Skiing	Figure skating	Martial Arts
Archery	Football (American)	Motocross
Auto Racing	Golf	Motorcycle Racing
Badminton	Gymnastics	Motorsports
Ballooning	Handball	Mountain Biking
Baseball	Hang Gliding	Mountaineering
Basketball	Harness racing	NASCAR (auto racing)
Beach Volleyball	High Jump	Nordic Skiing
Bob Sledding	Hiking	Off Road Racing
Body Building	Hill Climb	Offshore Powerboat Racing
Bowling	Hill Climbing	Olympics (Summer & Winter)*
Boxing (amateur)	Horse Racing	Paddle Tennis (Ping Pong)
Boxing (professional)	Hydroplane Racing	Paddle Ball
Cricket	Ice Climbing	Parachuting
Cross Country Skiing	Ice Hockey	Paragliding
Curling	Ice Skating	Parasailing
Cycling	Indy-Car Racing (series)	Pole Vault
Decathlon	Jai Alai	Polo
Diving	Judo	Racquet Ball
Dog Racing	Jujutsu	Rafting
Dog Sledding	Karate	Rallying
Down Hill Skiing	Kart Racing	Rugby
Drag racing	Kayaking	Skiing (snow)
Endurance Racing	Kickboxing	Soccer (futbol)
Endurance Running	Lacrosse	Super Bowl (football)
Equestrian	Luge	Swimming
Fencing	Lumber Jacking	
Field Hockey	Marathon Running	

Tennis

Thoroughbred Horse
Racing

World Cup (soccer)*

WFOC (series)

World Series (baseball)

Wrestling (Freestyle)

Wrestling (Professional)

Appendix II: Canada WFOC Event Questionnaire

Montreal, Quebec, Canada

June 11-12, 2010

Full Name of Person:

Gender of Person:

Female Male

Age of Person:

18-23 24-29 30-35 36-41
 42-47 48-53 54-59 60 or more

Marital Status:

Married Single Divorced Widowed

Educational Level of Person:

High School Graduate Attended College
 College Graduate

Income Level:

under US\$50,000 between US\$50,000-US\$100,000
 over US\$100,000

Nationality:

USA Canada Mexico Other:

Ethnicity:

Belgian Dutch English French
 German Irish Italian Polish
 Portuguese Russian Scottish Spanish
 Swedish Other:

Place and Time of Interview:

- Montreal, June, 2010
- Indianapolis, July, 2010
- Mexico City, August, 2010 (Event not held)

How many F1 events do you attend each year?

- 1 2 3 or more

How far do you travel to attend each F1 event you attend?

- 1. _____ kilometres/ miles
- 2. _____ kilometers/miles
- 3. _____ kilometers/ miles

General Questions:

- 1. Which world sport has the greatest impact in globalization?

- Olympics
- World Cup
- World Formula One Championship
- Other:

- 2. Is the WFOC a legitimate part of the globalization process?

- Yes No Do Not Know

Comment:

Cultural:

- 1. If you arrived in your present home nation from another country, were you a WFOC fan before you arrived?

- Yes No

2. If so, why did you pick your present home country to immigrate to?

Comment:

3. What is your primary language?

- English French
 Spanish Other

4. If English is not your primary language, do you follow the WFOC in English language media?

- Yes No

5. As a WFOC fan, culturally, what is the most important factor for your interest?

- Support of a driver from your of your nationality
 Support of a driver from your ethnicity
 Support of a team from your nationality
 Support of a team from your ethnicity
 Support of a sponsoring company of your nationality
 Support of a sponsoring company of your ethnicity
 Support of your home WFOC race event
 Support of motor sport in general
 None of the above

Comment:

6. Is nationalism present in the WFOC for North Americans?

- Yes No

Comment:

7. What does your home WFOC race event contribute globally?

Comment:

8. As a global player, what does WFOC contribute to your home nation?

Comment:

9. Is the WFOC perceived as popular in North America?

Yes No

Why?

10. Are the North American WFOC race events perceived as popular globally?

Yes No

Why?

11. What are the reciprocal social benefits between the WFOC and North America?

Comment:

12. How does world media portray the North American WFOC race events and other forms of participation and vice versa?

Comment:

Industrial:

1. Is the WFOC an effective way to advertise and market global products in North America and for North American products to be advertised or marketed globally?

Yes No

Comment:

2. What global or multi-national North American companies are the most prominent in the WFOC as a sponsoring advertiser or applied technology?

Name *(or can list as a multiple choice)*:

- 3.. What obvious products and technologies from the WFOC have been transferred or traded between North America and the balance of the world that have affected the average person?

Name *(or can list as a match according to importance)*:

4. Is there a global understanding of the assessed values spent by multi-national corporations in the WFOC and the contributions made by North American companies?

Yes No

Comment:

Commerce, Government, or Other:

1. Are any WFOC race events a tourism destination for North Americans?

Yes No

2. Do the North American rounds of the WFOC make Mexico, Canada, and the United States a tourism destination?

Yes No

Comments:

3. Do WFOC race events in North America produce significant amounts of income for the local economy?

Comments:

4. Should government inject public funds to gain or support WFOC race events?

Yes No

If so, at what level should there be government interference?

- Federal
- Province or State
- City or other local

Appendix III: USA WFOC Event Questionnaire

Austin, Texas, USA

November 15-16, 2013

Gender of Person:

Female
Male

Age of Person:

18-23
24-29
30-35
36-41
42-47
48-53
54-59
60 or more

Marital Status:

Married
Single
Divorced
Widowed

Educational Level of Person (Highest Level Achieved):

High School Graduate
Attended College
College Graduate

Income Level:

- US\$50,000 or less
- US\$50,000-US\$100,000
- US\$100,000 or more

Nationality (self-described as citizen of):

- United States
- Canada
- Mexico

Ethnicity:

- Belgian
- Dutch
- English
- French
- German
- Irish
- Italian
- Polish
- Portuguese
- Russian
- Scottish
- Spanish
- Swedish
- Other:

How many F1 events do you attend each year?

- 1
- 2
- 3 or more

How far do you travel to attend this F1 event?

- Under 25 miles
- 25 to 300 miles
- More than 300 miles

General Questions:

Which world sport has the greatest impact on globalization?

- Olympics
- World Cup
- World Formula One Championship

Is the WFOC a legitimate part of the globalization process?

- Yes
- No
- Do Not Know

Cultural:

If you arrived in your present home nation from another country, were you a WFOC fan before you arrived?

- Yes
- No

If so, why did you pick your present home country to immigrate to?

- Relatives
- Immigration Policy
- Personal Preference

What is your primary language?

- English
- Spanish

If English is not your primary language, do you follow the WFOC in English language media?

- Yes
- No

As a WFOC fan, culturally, what is the most important factor for your interest?

- Support of a driver from your nationality
- Support of a driver from your ethnicity
- Support of a team from your nationality
- Support of a team from your ethnicity
- Support of a sponsoring company of your nationality
- Support of a sponsoring company of your ethnicity
- Support of your home WFOC race event
- Support of motor sport in general
- None of the above

Is nationalism present in the WFOC for North Americans?

- Yes
- No

What does your home WFOC race event contribute globally?

- Showcase place for tourism
- Showcase place in world sport
- Showcase as a financial capital
- Showcase place for technology

As a global player, what does WFOC contribute to your home nation?

- Allows nation to be part of sport's biggest championship
- Opportunity to advertise nation's products to the world
- Allows nation to be part of world sport
- Opportunity to display national pride to the world
- Opportunity to display advanced technology

Is the WFOC perceived as popular in North America?

- Yes
- No

Are the North American WFOC race events perceived as popular globally?

- Yes
- No

What are the reciprocal social benefits between the WFOC and North America?

- International Social Reach
- Shared Technology
- Import/Export Products
- Showcase Tourist Destination

How does world media portray the North American WFOC race events and other forms of participation and vice versa?

- Favourable to other WFOC events
- Favourable to other forms of racing
- Favourable to other world sports
- Unfavourable

Industrial:

Is the WFOC an effective way to advertise and market global products in North America and for North American products to be advertised or marketed globally?

- Yes
- No
- Do Not Know

What global or multi-national North American companies are the most prominent in the WFOC as a sponsoring advertiser or applied technology?

- Ferrari (global)
- Red Bull (global)
- Mercedes (global)
- Renault (global)
- Infiniti (global)
- Pirelli (global)
- PETRONAS (global)
- Shell (global)
- Santander (global)
- GE (North American)
- UPS (North American)
- Tel Mex (North American)
- Vodafone (global)
- Airbus (global)
- Geox (global)
- Blackberry (North American)
- Casio (global)
- Total (European)
- Tissot (global)
- GENNI (European)
- Kingfisher (Asian)
- Sahara (Asian)
- Whyte and Mackay (European)
- Clear (Asian)
- Other: _____

What obvious products and technologies from the WFOC have been transferred or traded between North America and the balance of the world that have affected the average person?

- | | |
|------------------------|--------------------------|
| Automotive or related | <input type="checkbox"/> |
| Space-age materials | <input type="checkbox"/> |
| Information Technology | <input type="checkbox"/> |
| Consumables | <input type="checkbox"/> |

Is there a global understanding of the assessed values spent by multi-national corporations in the WFOC and the contributions made by North American companies?

- | | |
|-------------|--------------------------|
| Yes | <input type="checkbox"/> |
| No | <input type="checkbox"/> |
| Do Not Know | <input type="checkbox"/> |

Commerce, Government, or Other:

Are any WFOC race events a tourism destination for North Americans?

- | | |
|-------------|--------------------------|
| Yes | <input type="checkbox"/> |
| No | <input type="checkbox"/> |
| Do Not Know | <input type="checkbox"/> |

Do the North American rounds of the WFOC make Mexico, Canada, and the United States a tourism destination for non-North Americans?

- | | |
|-------------|--------------------------|
| Yes | <input type="checkbox"/> |
| No | <input type="checkbox"/> |
| Do Not Know | <input type="checkbox"/> |

Do WFOC race events in North America produce significant amounts of income for the local economy?

- Yes
- No
- Do Not Know

Should government inject public funds to gain or support WFOC race events?

- Yes
- No
- Do Not Know

Please answer at what level if you said yes:

- Federal
- State
- City or other local
- State and City

Appendix IV: Schedule of WFOC Expert Interviewees

<u>No.</u>	<u>Nationality</u>	<u>Note</u>
001	Canadian	Active high level FIA Canada & FIA executive
002	American	Retired high level SCCA executive (deceased)
003	American	Active WFOC journalist
004	British	Active WFOC journalist
005	American	Former high-level corporate executive
006	Canadian	Active WFOC promoter
007	American	Active WFOC journalist
008	American	Active WFOC television personality
009	Singaporean	Active mid-level government official
010	Mexican	Retired Indy-car driver & active WFOC driver manager
011	American	Retired high level ACCUS & FIA official
012	British	Former WFOC team engineer
013	American	Former high-level corporate executive
014	Mexican	Active mid-level OMDAI executive
015	British	Former WFOC team engineer
016	Italian	Active WFOC team engineer
017	British	Former WFOC team engineer
018	Belgian	Former WFOC driver & GPDC executive
019	British	Active mid-level corporate executive
020	Mexican	Active high-level OMDAI & FIA executive and promoter
021	American	Active WFOC journalist (deceased)
022	Canadian	Active mid-level government official
023	American	Active high-level corporate executive & engineer
024	American	Active high-level ACCUS & FIA official

025	American	Active high-level corporate executive & engineer
026	Belgian	Active mid-level corporate executive
027	American	Active mid-level corporate executive & engineer
028	Canadian	Active WFOC journalist
029	Mexican	Active WFOC television personality
030	Italian	Active WFOC journalist
031	American	Retired high-level corporate executive & engineer
032	American	Former WFOC driver
033	British	Former WFOC driver
034	American	Mid-level government official

Appendix V: Montreal Questionnaire Results

Montreal, Quebec, Canada

June 11-12, 2010

78 Samples Taken
5 Samples Disqualified
73 Samples Processed

Primary Information:

Place and Time of Interview:

All interviews conducted at or near the subway station or on the bridge leading to the main entry of the Circuit Gilles Villeneuve, Montreal, on the mornings and afternoons of Friday 11 June 2010, (practice day), and Saturday 12 June 2010, (qualification day) of the Grand Prix du Canada weekend. No subject was approached when their allegiance was pre-determined by national flag, excessive team merchandise, etc.

Gender of Person:

Female	30	(41.1%)
Male	43	(58.9%)

Age of Person:

18-23	5	(06.8%)
24-29	8	(10.9%)
30-35	11	(15.0%)
36-41	16	(21.9%)
42-47	18	(24.6%)
48-53	14	(19.1%)
54-59	1	(01.3%)
60 or more	0	(00.0%)

Marital Status:

Married	26	(35.6%)
Single	31	(42.4%)
Divorced	16	(21.9%)
Widowed	0	(00.0%)

Educational Level of Person (Highest Level Achieved):

High School Graduate	31	(42.5%)
Attended College	30	(41.1%)
College Graduate	12	(16.4%)

Income Level:

US\$50,000 or less	22	(30.1%)
US\$50,000-US\$100,000	45	(61.6%)
US\$100,000 or more	6	(08.2%)

Nationality (self-described as citizen of):

USA	21	(28.7%)
Canada	47	(64.3%)
Mexico	0	(00.0%)
Other: Brazil	4	(05.4%)
Other: Columbia	1	(01.3%)

Ethnicity:

Belgian	2	(02.7%)
Dutch	0	(00.0%)
English	3	(04.1%)
French	27	(37.0%)
German	0	(00.0%)
Irish	3	(04.1%)
Italian	15	(20.5%)

Polish	4	(05.5%)
Portuguese	10	(13.7%)
Russian	0	(00.0%)
Scottish	0	(00.0%)
Spanish	9	(12.3%)
Swedish	0	(00.0%)
Other:	0	(00.0%)

How many F1 events do you attend each year?

1	55	(75.3%)
2	10	(13.7%)
3 or more	8	(11.0%)

How far do you travel to attend this F1 event?

Under 25 miles	45	(61.6%)
25 to 300 miles	22	(30.1%)
More than 300 miles	6	(08.2%)

General Questions:

Which world sport has the greatest impact on globalization?

Olympics	10	(13.7%)
World Cup	36	(49.3%)
World Formula One Championship	27	(37.0%)

Is the WFOC a legitimate part of the globalization process?

Yes	59	(80.8%)
No	6	(08.2%)
Do Not Know	8	(11.0%)

Cultural:

If you arrived in your present home nation from another country, were you a WFOC fan before you arrived?

Yes	23	(100%)
No	0	(00.0%)

If so, why did you pick your present home country to immigrate to?

Relatives	10	(43.5%)
Immigration Policy	1	(04.3%)
Personal Preference	12	(52.2%)

What is your primary language?

English	33	(45.2%)
French	25	(34.2%)
Spanish	7	(09.6%)
Other: Italian	2	(02.7%)
Other: Portuguese	6	(08.2%)

If English is not your primary language, do you follow the WFOC in English language media?

Yes	35	(87.5%)
No	5	(12.5%)

As a WFOC fan, culturally, what is the most important factor for your interest?

Support of a driver from your nationality	27	(37.0%)
Support of a driver from your ethnicity	4	(05.5%)
Support of a team from your nationality	17	(23.3%)
Support of a team from your ethnicity	3	(04.1%)
Support of a sponsoring company of your nationality	2	(02.7%)
Support of a sponsoring company of your ethnicity	0	(00.0%)
Support of your home WFOC race event	10	(13.7%)
Support of motor sport in general	10	(13.7%)
None of the above	0	(00.0%)

Is nationalism present in the WFOC for North Americans?

Yes	70	(95.9%)
No	3	(04.1%)

What does your home WFOC race event contribute globally?

Showcase place for tourism	26	(35.6%)
Showcase place in world sport	25	(34.2%)
Showcase as a financial capital	12	(16.4%)
Showcase place for technology	10	(13.7%)

As a global player, what does WFOC contribute to your home nation?

Allows nation to be part of sport's biggest championship	40	(54.8%)
Opportunity to advertise nation's products to the world	10	(13.7%)
Allows nation to be part of world sport	9	(12.3%)
Opportunity to display national pride to the world	8	(11.0%)
Opportunity to display advanced technology	6	(08.2%)

Is the WFOC perceived as popular in North America?

Yes	73	(100%)
No	0	(0%)

Are the North American WFOC race events perceived as popular globally?

Yes	72	(98.6%)
No	1	(01.4%)

What are the reciprocal social benefits between the WFOC and North America?

International Social Reach	32	(43.8%)
Shared Technology	30	(41.1%)
Import/Export Products	8	(11.0%)
Showcase Tourist Destination	3	(04.1%)

How does world media portray the North American WFOC race events and other forms of participation and vice versa?

Favourable to other WFOC events	39	(53.4%)
Favourable to other forms of racing	10	(13.7%)
Favourable to other world sports	6	(08.2%)
Unfavourable	18	(24.6%)

Industrial:

Is the WFOC an effective way to advertise and market global products in North America and for North American products to be advertised or marketed globally?

Yes	71	(97.3%)
No	0	(00.0%)
Do Not Know	2	(02.7%)

What global or multi-national North American companies are the most prominent in the WFOC as a sponsoring advertiser or applied technology?

Ferrari (global)	105 mentions
Hewitt-Packard (North American)	55
Red Bull (global)	54
Mercedes (global)	50
AT&T (North American)	49
Bridgestone (global)	48
BMW (global)	40
Shell (global)	30
Mobil (North American)	27
Marlboro (North American)	26
Virgin (global)	25
Molson (North American)	21
Johnnie Walker (global)	15
Renault (global)	15
Ford (North American)	10
Cosworth (global)	9
Fed Ex (North American)	9
Lenovo (global)	9
Petronas (global)	8
Vodafone (global)	5
Foster's (global)	4
Sony (global)	3
T-Mobile (global)	3
Kingfisher (global)	2
Target (North American)	2
DHL (global)	1
Hugo Boss (global)	1

Comment: No mention(s) of any Middle-Eastern global corporations (of which there are several examples). Some mention(s) of corporations not actively participating in the WFOC.

What obvious products and technologies from the WFOC have been transferred or traded between North America and the balance of the world that have affected the average person?

Automotive or related	40	(54.8%)
Space-age materials	20	(27.4%)
Information Technology	10	(13.7%)
Consumables	3	(04.1%)

Is there a global understanding of the assessed values spent by multi-national corporations in the WFOC and the contributions made by North American companies?

Yes	39	(53.4%)
No	21	(28.8%)
Do Not Know	13	(17.8%)

Commerce, Government, or Other:

Are any WFOC race events a tourism destination for North Americans?

Yes	51	(69.9%)
No	0	(00.0%)
Do Not Know	22	(30.1%)

Do the North American rounds of the WFOC make Mexico, Canada, and the United States a tourism destination for non-North Americans?

Yes	54	(74.0%)
No	6	(08.2%)
Do Not Know	13	(17.8%)

Do WFOC race events in North America produce significant amounts of income for the local economy?

Yes	65	(89.0%)
No	3	(04.1%)
Do Not Know	5	(06.9%)

Should government inject public funds to gain or support WFOC race events?

Yes	30	(41.1%)
No	30	(41.1%)
Do Not Know	13	(17.8%)

Please answer at what level if you said yes:

Federal	10	(33.3%)
Province or State	10	(33.3%)
City or other local	0	(00.0%)
Federal and Province	5	(16.7%)
Federal and local	5	(16.7%)

Appendix VI: Austin Questionnaire Results

Austin, Texas, USA

November 15-16, 2013

70 Samples Taken

0 Samples Disqualified

70 Samples Processed

Primary Information:

Place and Time of Interview:

All interviews conducted at or near the bus stations or in the parking lot in proximity to the main entry of the Circuit of the Americas, Austin, on the mornings and afternoons of Friday 15 November 2013, (practice day), and Saturday 16 November 2013, (qualification day) of the Grand Prix of the United States weekend. No subject was approached when their allegiance was pre-determined by national flag, excessive team merchandise, etc.

Gender of Person:

Female	39	(55.7%)
Male	31	(44.3%)

Age of Person:

18-23	2	(02.9%)
24-29	4	(05.7%)
30-35	10	(14.3%)
36-41	12	(17.1%)
42-47	20	(28.6%)
48-53	22	(31.4%)
54-59	0	(00.0%)
60 or more	0	(00.0%)

Marital Status:

Married	30	(42.9%)
Single	38	(54.2%)
Divorced	2	(02.9%)
Widowed	0	(00.0%)

Educational Level of Person (Highest Level Achieved):

High School Graduate	10	(14.3%)
Attended College	10	(14.3%)
College Graduate	50	(71.4%)

Income Level:

US\$50,000 or less	15	(21.4%)
US\$50,000-US\$100,000	25	(35.7%)
US\$100,000 or more	30	(42.9%)

Nationality (self-described as citizen of):

USA	62	(88.6%)
Canada	0	(00.0%)
Mexico	8	(11.4%)

Ethnicity:

Belgian	0	(00.0%)
Dutch	0	(00.0%)
English	16	(22.9%)
French	0	(00.0%)
German	14	(20.0%)
Irish	10	(14.3%)
Italian	12	(17.1%)
Polish	4	(05.7%)

Portuguese	0	(00.0%)
Russian	0	(00.0%)
Scottish	0	(00.0%)
Spanish	14	(20.0%)
Swedish	0	(00.0%)
Other:	0	(00.0%)

How many F1 events do you attend each year?

1	60	(85.7%)
2	10	(14.3%)
3 or more	0	(00.0%)

How far do you travel to attend this F1 event?

Under 25 miles	20	(28.6%)
25 to 300 miles	29	(41.3%)
More than 300 miles	21	(30.1%)

General Questions:

Which world sport has the greatest impact on globalization?

Olympics	28	(40.0%)
World Cup	05	(07.1%)
World Formula One Championship	37	(52.9%)

Is the WFOC a legitimate part of the globalization process?

Yes	59	(84.3%)
No	08	(11.4%)
Do Not Know	03	(04.3%)

Cultural:

If you arrived in your present home nation from another country, were you a WFOC fan before you arrived?

Yes	08	(100%)
No	0	(0%)

If so, why did you pick your present home country to immigrate to?

Relatives	0	(00.0%)
Immigration Policy	0	(00.0%)
Personal Preference	08	(100 %)

What is your primary language?

English	61	(87.1%)
Spanish	9	(12.9%)

If English is not your primary language, do you follow the WFOC in English language media?

Yes	9	(100%)
No	0	(00.0%)

As a WFOC fan, culturally, what is the most important factor for your interest?

Support of a driver from your nationality	13	(18.7%)
Support of a driver from your ethnicity	2	(02.9 %)
Support of a team from your nationality	0	(00.0%)
Support of a team from your ethnicity	0	(00.0%)
Support of a sponsoring company of your nationality	15	(21.4%)
Support of a sponsoring company of your ethnicity	0	(00.0%)
Support of your home WFOC race event	15	(21.4%)
Support of motor sport in general	25	(35.6%)
None of the above	0	(00.0%)

Is nationalism present in the WFOC for North Americans?

Yes	55	(78.6%)
No	15	(21.4%)

What does your home WFOC race event contribute globally?

Showcase place for tourism	40	(57.1%)
Showcase place in world sport	16	(22.9%)
Showcase as a financial capital	0	(00.0%)
Showcase place for technology	14	(20.0%)

As a global player, what does WFOC contribute to your home nation?

Allows nation to be part of sport's biggest championship	24	(34.3%)
Opportunity to advertise nation's products to the world	20	(28.6%)
Allows nation to be part of world sport	12	(17.1%)
Opportunity to display national pride to the world	0	(00.0%)
Opportunity to display advanced technology	14	(20.0%)

Is the WFOC perceived as popular in North America?

Yes	51	(72.9%)
No	19	(27.1%)

Are the North American WFOC race events perceived as popular globally?

Yes	66	(94.3%)
No	4	(05.7%)

What are the reciprocal social benefits between the WFOC and North America?

International Social Reach	18	(25.8%)
Shared Technology	20	(28.6%)
Import/Export Products	6	(08.5%)
Showcase Tourist Destination	26	(37.1%)

How does world media portray the North American WFOC race events and other forms of participation and vice versa?

Favourable to other WFOC events	49	(70.0%)
Favourable to other forms of racing	0	(00.0%)
Favourable to other world sports	0	(00.0%)
Unfavourable	21	(30.0%)

Industrial:

Is the WFOC an effective way to advertise and market global products in North America and for North American products to be advertised or marketed globally?

Yes	58	(82.9%)
No	4	(05.7%)
Do Not Know	8	(11.4%)

What global or multi-national North American companies are the most prominent in the WFOC as a sponsoring advertiser or applied technology?

Ferrari (global)	70 mentions
Red Bull (global)	69
Mercedes (global)	66
Infiniti (global)	28
Shell (global)	20
Pirelli (global)	19
Renault (global)	15
GE (North American)	14
Geox (global)	12
UPS (North American)	12
Santander (global)	11
Vodafone (global)	10
Petronas (global)	8
Airbus (global)	5
Tel Mex (North American)	5
Blackberry (North American)	4
Casio (global)	3
Total (European)	2
Kaspersky (North American)	2
Tissot (global)	1
Pepe Jeans (global)	1
GENNI (European)	1
Kingfisher (Indian)	1
Sahara (Indian)	1
Clear (Asian)	1

What obvious products and technologies from the WFOC have been transferred or traded between North America and the balance of the world that have affected the average person?

Automotive or related	30	(42.9%)
Space-age materials	35	(50.0%)
Information Technology	5	(07.1%)
Consumables	0	(00.0%)

Is there a global understanding of the assessed values spent by multi-national corporations in the WFOC and the contributions made by North American companies?

Yes	20	(28.6%)
No	25	(35.7%)
Do Not Know	25	(35.7%)

Commerce, Government, or Other:

Are any WFOC race events a tourism destination for North Americans?

Yes	51	(72.9%)
No	9	(12.8%)
Do Not Know	10	(14.3%)

Do the North American rounds of the WFOC make Mexico, Canada, and the United States a tourism destination for non-North Americans?

Yes	60	(85.7%)
No	0	(00.0%)
Do Not Know	10	(14.3%)

Do WFOC race events in North America produce significant amounts of income for the local economy?

Yes	65	(92.9%)
No	0	(00.0%)
Do Not Know	5	(07.1%)

Should government inject public funds to gain or support WFOC race events?

Yes	12	(17.1%)
No	55	(78.6%)
Do Not Know	3	(04.3%)

Please answer at what level if you said yes:

Federal	0	(00.0%)
State	0	(00.0%)
City or other local	0	(00.0%)
State and City	12	(100%)

Bibliography

- Aaker, D. and Joachimsthaler, E. (1999) *The Lure of Global Branding*, <https://hbr.org/1999/11/the-lure-of-global-branding> (Accessed December 1, 2008)
- About (2013) *Globalization (definition)*, <http://www.geography/about.com/od/globalproblemmandissue/a/globalization.htm> (Accessed April 19, 2013)
- Al-Rodhan, N. and Stoudmann, G. (2006) 'Definitions of Globalization: A Comprehensive Overview and a Proposed Definition', *Program on the Geopolitical Implications of Globalization and Transnational Security*, Slatkine: Geneva.
- Albrow, M. (2002), *Frontiers of Globalization Research: Theoretical and Methodological Approaches*, St. John's University Press: New York.
- Andrews, D.L. and Silk, M. (2001) *The Blackwell Companion to Globalization*, John Wiley and Sons: Hoboken.
- Aninat, Edward (2002) 'Surmounting the Challenges of Globalization', *Finance and Development*, March 4, 2002 edition.
- Arnis, John (2002) 'Good Things Come to Those Who Wait', *European Sport Management Quarterly*.
- Amis, John and Cornwell, T Bettina (2005) 'Global Sport Sponsorship', Bloomsbury Academic: London.
- Autosport (2013a) *Untitled*, <http://www.autosport.com> (Accessed December 29, 2013)
- Autosport (2007b) *F1's Middle East Push*, <http://www.autosport.com> (Accessed November 11, 2007)
- Autosport (2008c) *USGP Set to Return?* <http://www.autosport.com> (Accessed November 1, 2008)
- Autosport (2009d) *Teams Pushing for USGP*, <http://www.autosport.com> (Accessed December 9, 2009)
- Autosport (2009e) *Teams Urged to Act to Get USGP Back*, <http://www.autosport.com> (Accessed February 18, 2010)
- Autosport (2009f) *Teams Pushing for US GP*, <http://www.autosport.com> (Accessed January 5, 2010)
- Autoweek (2007a) *Ecclestone: Indy Not Promoting F1 Enough*, <http://www.autoweek.com> (accessed July 10, 2009)
- Autoweek (2007b) *Ecclestone: USGP 'not vital' for F1*, <http://www.autoweek.com> (accessed August 23, 2009)
- Autoweek (2007c) *Indy Hopes for Long Term GP Deal*, <http://www.autoweek.com> (accessed October 4, 2007)
- Autoweek (2009d) *No Canada*, <http://www.autoweek.com> (Accessed May 1, 2010)
- Autoweek (2009e) *F1 Back to Indy?* <http://www.autoweek.com> (Accessed May 1, 2010)

- Badenhausen, K. (2011) *The World's 50 Most Valuable Sports Teams*, <http://forbes.com/sites/kurtbadenhausen/2011/07/12/the-worlds-50-most-valuable-sports> (Accessed November 2, 2013)
- Baime, A.J. (2014) 'Unobstructed Vision', *Autoweek*.
- Bairner, Alan (2001) *Sport, Nationalism, and Globalization*, State University of New York Press: New York.
- Baldwin, John R. and Gorecki, Paul (1998) *The Dynamics of Industrial Competition: North American Perspective*, Cambridge University Press: New York.
- Bale, John and Maguire, Joseph A. (1994) *The Global Sports Arena: Athletic Talent Migration in an Independent World*, Routledge: Oxford.
- Bandura, Albert (1986) *Social Cognitive Theory*, <http://www.uky.edu/~eushe2/Bandura/Bandura1989ACD.pdf> (Accessed June 10, 2015)
- Barker, Chris (2002) *Television, Globalization and Cultural Identities*, Open University Press: London.
- Bialik, C. (2011) *The Numbers Guy: Figuring Out Sports*, <http://www.forbes.com/sites/kurtbadenhausen/2011/07/12/the-worlds-50-most-valuable-sports> (Accessed November 1, 2013)
- Biggest Global Sports (2015) <http://www.biggestglobalsports.com> (Accessed January 30, 2016)
- Bitz, Pierre and d'Astous, Alain (1995) 'Consumer Evaluations of Sponsorship Programmes', *European Journal of Marketing*, Volume 29.
- Bognon, Pierre (2008) *The Anatomy of Sports Fans*, Booksurge Publishing: North Charleston.
- Bok, Sissela (1982) *Secrets: On the Ethics of Concealment and Revelation*, Vintage Publications: London.
- Bridges, F.J. and Roquemore, L. L. (1996) *Management for Athlete/Sport Administration: Theory and Practice*, ESM Books: Decatur.
- Bryson, John, Henry, Nick, Keeble, David and Martin, Ron (2004) *The Economic Geography Reader*, John Wiley & Sons Ltd.: Hoboken.
- Budd, Adrian and Levermore, Roger (2003) *Sport and International Relations: An Emerging Relationship-Sport in the Global Society*, Frank Cass Publishing: London.
- Buchanan, Patrick (2007) *Day of Reckoning*, St. Martin's Press: New York.
- Business Dictionary (2013) *Technology*, <http://www.businessdictionary.com/definition/technology.html> Business F1 (Accessed Jul 27, 2013)
- Business F1 (2008) *USGP Collects F1 Award*, <http://www.businessf1.com> (Accessed January 4, 2008)
- CIA (2007) *CIA Country Fact Book*, <http://www.cia.gov> (accessed November 15, 2010)

- Cavanaugh, John and Mander, Jerry (2006) *Alternatives to Economic Globalization*, Berrett-Koehler Publishers: San Francisco.
- Chicago Tribune (2007) *F1 Working on US Stay*
- Chicago Tribune (2007) *Survey Finds Concerns over Globalization*
- Clark, Kim and Fujimoto, Takahiro (1991) *Product Development Performance*, Harvard Business Press: Cambridge.
- Clark, Gordon, Feldman, Maryann, and Gertler, Meric (2000) *The Oxford Handbook of Economic Geography*, Oxford University Press: Oxford.
- Clark, Gordon and Tracey, Paul (2003) *Alliances, Networks and Competitive Strategy: Rethinking Clusters of Innovation*, *Growth and Change*, February, 2003
- Clifford J. (1992) *Traveling Cultures in Cultural Studies*, Routledge: London.
- CNN (2007) *Sponsorship, the big business behind Formula 1*, http://edition.cnn.com/2007/SPORT/09/18/behind_sponsorship/ (Accessed November 23, 2013)
- Coase, R.H. (1972) *Durability and Monopoly*, University of Chicago: Chicago.
- Coe, Neil M., Dicken, Peter, and Hess Martin (2008) 'Introduction: Global production Networks - Debates and Challenges', *Journal of Economic Geography*, Volume 8, Issue 3, pp. 267-269.
- Coe, Neil M., Dicken, Peter, and Hess, Martin (2008) 'Global production Networks: Realizing the Potential', *Journal of Economic Geography*, Volume 8, Issue 3, pp. 271-295.
- Coe, Neil. M and Wai-Chung Yeung, Henry (2015) *Global Production Networks – Theorizing Economic Developments in an Interconnected World*, Oxford Publications: Oxford.
- Colvin, Geoff (2008) *Talent is Overrated*, Soundview Executive Book Summaries, Kennett Square.
- Cooper, Adam (2014) 'Ferrari Wants More American Races', *Autoweek*.
- Corbin, Juliet and Strauss, Anselm (2008) *Basics of Qualitative Research*, Sage Publications: London.
- Corkindale, G. (2011) *Importance of Organizational Design and Structure*, http://www.blogs.harvardbusinessreview.org/corkindale/2011/02/the_importance_of_organizational.html (Accessed June 5, 2013)
- Cross, Gary S. (2000) *An All-consuming Century: Why Commercialism Won in Modern America*, Columbia University Press: New York.
- Cryer, Pat (2006) *The Research Student's Guide to Success*, Open University Press: Milton Keynes.
- Dant, Tim (2004) 'The Driver-car', *Theory, Culture & Society*, Volume 21, Number 4-5, pp. 61-79.
- Davies, Martin Brett (2007) *Doing a Successful Research Project*, Palgrave, Macmillan: New York.

- Delanty, G. and Rumford, C. (2005) *Rethinking Europe: Social theory and the implications of Europeanization*, Routledge: London.
- Dicken, Peter (2003) *Global Shift*, Guilford Press: New York.
- Dionísio, Pedro, Leal, Carmo, and Moutinho, Luiz (2008) "Fandom affiliation and tribal behaviour: a sports marketing application", *Qualitative Market Research: An International Journal*, Volume 11, Number 1.
- Economaki, Chris (2007) 'Editor's Column', *National Speed Sport News*.
- Economist (2011). *And the silver goes to...*
<http://www.economist.com/blogs/gametheory/2011/09/ranking-sports> (Accessed November 2, 2013)
- Emory University (2013) *The Globalization Network: Globalization Theories*,
<http://www.sociology.emory.edu/globalization/theories01.html> (Accessed April 19, 2013)
- Evans, S. (2009) *Sport and Society – The Summer Olympics and Paralympics thru the Lens of Social Science*, The British Library,
<http://www.bl.uk/sportandsociety/exploresocsci/sportsoc/sociology/sociology.html>
 (Accessed January 30, 2016)
- Farrelly, John Francis, Quester, Pascale G., and Burton, Richard (1997) 'Integrating Sports Sponsorship into the Corporate Marketing Function: An International Comparative Study", *International Marketing Review*, Volume 14, Number 3, pp. 170–182.
- Federation of International Football Association (2016) <http://www.fifa.com> (Accessed January 16, 2016)
- Financial Times (2006) 'unknown'
- Financial Times (2008) February 25, 2008 edition
- Foer, Franklin (2005) *How Soccer Explains the World*, Harper Perennial: New York.
- Forbes (2013) *Forbes Announces the 50 Most Valuable Sports Teams 2013*,
<http://www.forbes.com/sites/forbespr/2013/07/15/forbes-announces-the-worlds-50-most-valuable-sports-teams/> (Accessed November 2, 2013)
- Foreign Policy (2009), Washington, D.C.
- Fort, Rodney (2003) 'European and North American Sports Differences (?)', *Scottish Journal of Political Economy*, Volume 47, Number 4, pp.431–455.
- Friedman, Dave (2004) *Pro Sports Car Racing in America from 1958-1974*, Motor Books: Oshkosh.
- Friedman, Thomas (2000) *The Lexus and the Olive Tree*, Anchor Books: New York.
- Friedman, Thomas (2007) *The World is Flat*, Picador: San Francisco.
- Giddens, Anthony (2001) *On the Edge: Living with Global Capitalism*, Vintage: London.
- Giulianotti, Richard and Robertson, Roland (2007) *Globalization and Sport: Transnational Dimensions*, Blackwell Publishing: Oxford.
- Glassman, James K. (2014) 'How to Be a Smarter Investor', *Kiplinger's Personal Finance*, March, 2014 edition, pp. 32-34.

- Gorard, Stephen (2001) *Quantitative Methods in Educational Research*, Continuum: London
- Gorn, Elliott and Goldstein, Warren Jay (1993) *A Brief History of American Sports*. University of Illinois Press: Champaign.
- Graham, Stedman, Delpy Neirotti, Lisa and Goldblatt, Joe (2001) *The Ultimate Guide to Sports Marketing*, McGraw-Hill: New York.
- Grand Prix (2016) *Berger Hopes F1 Avoids Power Struggle*, <http://www.grandprix.com> (Accessed September 28, 2016)
- Grand Prix (2007) *Formula One at Davos*, <http://www.grandprix.com> (Accessed December 8, 2007)
- Grand Prix (2007) *International Monetary Fund: World Exports as a Share of Total Global Economic Input*, <http://www.grandprix.com> (Accessed December 12, 2007)
- Grand Prix 24/7 (2011) *More Than Half a Billion Watched F1 in 2010*, <http://www.grandprix247.com/2011/01/23/more-than-half-a-billion-watched-f1-in-2010/> (Accessed November 2, 2013)
- Gregoire, Francoise (2006) *Who Works In Formula One: The Definitive Guide to Formula One*, Who Works International: London.
- Groza, Mark, Cobbs, Joe and Schaefer, Tobias (2012) 'Managing A Sponsored Brand: The Importance of Sponsorship Portfolio Congruence', *International Journal of Advertising*, Volume 31, Number 1, pp. 63-65.
- Gummesson, Evert (2005) 'Qualitative research in marketing: Road-map for a wilderness of complexity and unpredictability', *European Journal of Marketing*, Volume 39, Number 3/4, pp. 309–327.
- Hargreaves, Jennifer (1982) *Sport, Culture and Ideology*, Routledge Sports Library: New York.
- Harvey, J., Rail, G. and Thibault, L. (1996) 'Globalization and Sport Sketching a Theoretical Model for Empirical Analyses', *Journal of Sport & Social Issues*, August, 1996 edition, Volume 20, Number 3.
- Held, D. McGraw, A. Goldbatt, D. and Perraton, J. (1999) *Global Transformations: Politics, Economics and Culture*, Polity Press: Cambridge.
- Hirst, Paul and Thompson, Grahame (2001) *Globalization in Question: The International Economy and the Possibility of Governance*, Polity Press: Cambridge.
- Henry, Nick, Angus, Tim, Jenkins, Mark and Aylett, Chris (2007) *Motorsport Going Global*, Palgrave Macmillan: London.
- Holm and Sorenson (1995) *Whose World Order?: Uneven Globalization and the End of the Cold War*, Westview Press: Boulder
- Home, J. and Manzenreiter, W. (2006) 'Sports Mega Events: social scientific analyses of a global phenomenon', *Sociological Review*, Volume 54, Number 2.

- Horton, P. (2012) *The Nationalistic Side of Formula One*, <http://www.F1zone.net/news/the-nationalistic-side-of-formula-one/12381/> (Accessed February 18, 2012)
- Houilhan, Barrie (2014) *The Government and Politics of Sport*, Routledge Library Editions: New York.
- How Stuff Works (2013) *Top Ten Technologies From Racing*, <http://www.auto.howstuffworks.com/under-the-hood/trends-innovations/top-10-car-tech-from-racing.htm#page=10> (Accessed July 28, 2013)
- Huei, P. S. (2007) *Why Hosting F1 is a Winning Formula for Singapore*. <http://www.motoring.asiaone.com/Motoring/Motorworld/OtherStory/A1Story20070523-8182.htm> (Accessed May 3, 2013)
- Humphrey, John and Memedovic, Olga (2003) *The Global Automotive Industry Value Chain: What Prospects for Upgrading Developing Countries*. http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=424560 (Accessed October 29, 2015)
- Indianapolis Star (2007a) 'Business Lap up F1 Race Influx'
- Indianapolis Star (2007b) 'Future of USGP Still Very Much Up in the Air'
- Indianapolis Star (2007c) 'Hold Race Anywhere but Here'
- Infed (2007) *Globalization* (definition), <http://www.infed.org/> (Accessed February 6, 2012)
- International Monetary Fund (2014) *International Monetary Fund: Overview*, <http://www.imf.org/overview> (Accessed July 17, 2014)
- International Review for the Sociology of Sport (2000) Special issue, September 2000 edition.
- Investor Words (2005) *Globalization* (definition), <http://www.investorwords.org> (Accessed June 3, 2013)
- Jackson, Steve and Jay Scherer (2010) *Globalization, Sport and Corporate Nationalism*, Peter Lang International Academic: Oxford.
- Jenkins, Mark (2004) 'Superior Performance in Changing Times', *European Business Journal*, Volume 16, Number 1, pp. 10-19.
- Jenkins, Mark, Pasternak, Ken and West, Richard (2005) *Performance at the Limit*, Cambridge University Press: Cambridge.
- Jenkins, R. (2002) *The Post-national Self: Belonging and Identity*, University of Minnesota Press: Minneapolis.
- Jones, Andrew (2006) *Dictionary of Globalization*, Polity Press: Cambridge.
- Kaplan, Robert (2009) *The Revenge of Geography*, Random House: New York.
- Kearney, A.T. (2013) *Culture and Values*, <http://www.atkearney.com> (Accessed October 12, 2013)
- King, M. (2014) *Interconnectedness, Global Risks: No Man, or Business, is an Island*, <http://www.ifac.org/global-knowledge-gateway/viewpoints/interconnected-global-risks-no-man-or-business-island> (Accessed August 13, 2014)

- Korten, David C. (2001) *When Corporations Rule the World*, Berrett-Koehler Publishers: San Francisco.
- Kottak, Conrad and Kozaitis, Kathryn (2003) *On Being Different: Diversity and Multiculturalism in the North American Mainstream*, McGraw-Hill Humanities Social: New York
- Kratke, Stefan (2011) *How Manufacturing Industries Connect Cities across the World: Extending Research on Multiple Globalizations*,
<http://www.lboro.ac.uk/gawc/rb/rb391.html> (Accessed October 25, 2015)
- Kuper, Simon (July 2013) 'Bernie Ecclestone: The F1 Boss on the Skids', *Financial Times*, <http://www.ft.com/cms/s/0/552592e4-ef0d-11e2-bb27-00144feabdc0.html#axzz48C2VayZC> (Accessed July 19, 2013)
- Kurtzman, J. (2005) Sport & Tourism, *Journal of Sport Tourism*, Volume 10, Number 1.
- Leeds, Michael and von Allmen, Peter (2004) *The Economics of Sports*, Pearson: London.
- Levermore R. and Budd, A. (2003) *Sport and International Relations: An Emerging Relationship (Global Society)*, Routledge: London.
- Levitin, David J. (2014) *The Organized Mind*, Dutton Adult: New York.
- Levitt, Theodore (1983) 'The Globalization of Markets', *The Harvard Business Review*, <https://hbr.org/1983/05/the-globalization-of-markets> (Accessed on June 8, 2014)
- Los Angeles Times (2007) 'Indy, Formula One at Crossroads'
- Lucas, C. (1996) *Quantifying Complexity Theory*,
<http://www.calresco.org/lucas/quantify.htm> (Accessed June 5, 2013)
- Lynch, David (2006) 'Election Pushes Globalization to Forefront', *USA Today*.
- Lynch, David (2006) 'Developing Nations Poised to Challenge USA', *USA Today*.
- MacAloon, John J. (1984) *Rite, Drama, Festival, Spectacle: Rehearsals Toward a Theory of Cultural Performance*, Institute for the Study of Human Issues: Arlington
- Marketing Management (2007) 'The Need for Speed'
- McCarthy, Laton (1988) *Friends In High Places: The Bechtel Story: The Most Secret Corporation and How It Engineered the World*, Ballantine Books: New York.
- Meenaghan, Tony (1991) *Sponsorship: Legitimizing the Medium*, *European Journal of Marketing*, <http://www.emeraldinsight.com/doi/abs/10.1108/EUM00000000000627> (Accessed June 3, 2013)
- Mehta, Uday Singh (2003) *Liberalism and Empire*, University of California Press: Berkley.
- Mendeley (2014) *Groups*, <http://www.mendeley.com/groups/> (Accessed July 31, 2014)
- Merriam-Webster, (2006) *Dictionary*, Merriam-Webster: Springfield.
- Miller, Tobe, Lawrence, Geoffrey, McKay, Jim and Rowe, David (2001) *Globalization and Sport: Playing the Field*, Sage Publications: Thousand Oaks.

- Minder, Raphael (2008) 'Eyes on the Tiger', *Financial Times*, September 24, 2008 edition.
- Moore, J. (2001) 'Globalization in Historical Perspective', *Globalization in Historical Perspective, Science & Society*: Volume 65, Number 3, pp. 386-397
- Mora, Michaela (2010) *Qualitative vs Quantitative Research – When to Use Which*, <http://www.surveygizmo.com/survey-blog/qualitative-quantitative-research/> (Accessed May 5, 2011)
- Morgan, Glenn (2002) 'Transnational Communities and Business Systems', *Global Networks*, Volume 1, Number 2, pp. 113-130.
- Murphy, Colum (2014) 'Chinese Auto Makers Struggle to Get Into North America', *Wall Street Journal*, January 9, 2014 edition.
- Naim, Moises (2009) 'Globalization', *Foreign Policy*, <http://foreignpolicy.com/2009/09/30/think-again-globalization/> (Accessed January 12, 2014)
- National Bureau of Economic Research (2007) *Globalization in Historical Perspective*, University of Chicago Press: Chicago.
- National Speed Sport News (2007) 'Interview with BMW's Mario Theissen'
- Nielson (2013) *Networks Air Over 43,000 Hours of Sports Event Coverage in 2009*, <http://www.nielson.com/us/en/newswire/2010/networks-air-over-43000-hours-of-sports-coverage-in-2009/> (Accessed November 2, 2013)
- Nikitin and Elliott (2000) *Globalization and Foreign Direct Investment*, http://ceswp.uaic.ro/articles/CESWP2013_V2_CHI.pdf (Accessed unknown)
- Noble, J. (2013) *Mexican Grand Prix set for 2014 Formula 1 calendar slot*, <http://www.autosport.com/news/report.php/id/109493> (Accessed August 25, 2013)
- Olympics (2015) *Olympics*. <http://www.olympics.org> (Accessed January 29, 2016)
- O'Rourke, Kevin H. and Williamson, Jeffrey G. (2000) *When did Globalization Begin?* University College Dublin and Harvard University: Cambridge.
- Osterhammel, Jurgen and Peterson, Niels P. (2005) *Globalization: A Short History*, Princeton University Press: Princeton.
- Pardini, N. (2008) *Globalization and Sports: Part 1*, <http://www.bleacherreport.com/articles/25902-globalization-and-sports-an-overview-part-i> (Accessed November 3, 2012)
- Parkhouse, Bonnie L., (1991) *The Management of Sport: Its Foundation and Application*, McGraw-Hill: New York.
- Parker, Barbara (1999) *Evolution and Revolution: From International Business to Globalization*, Sage Publications: Thousand Oaks.
- Parkes, Ian (2016) F1 could learn from 'American way' with new owners - Toto Wolff, <http://www.autosport.com/news/report.php/id/126064/f1-could-learn-from-american-owners--wolff> (Accessed September 5, 2016)

- Perstana Barros, Carlos, Ibrahim Muradali and Szymanski, Stefan (2006) *Comparative Economics of North American and European Sports*, Edward Elgar Publishing: Cheltenham
- Phillips, Estelle M. and Pugh, Derek S. (2005) *How to get a PhD*, Open University Press: Milton Keynes.
- Pieterse, J.N. (1995), *Globalization as Hybridization*, Sage Publications: Thousand Oaks.
- Pit Pass (2007) *Joey Chitwood: F1 and Indy*, <http://www.pitpass.com> (Accessed February 2, 2008)
- Pooley, James (1997) 'Trade Secrets', *WIPO Magazine*, 2013, Volume 3, pp. 2-4
- Porter, Michael (2000), *The Oxford Handbook of Economic Geography*, Oxford University Press: Oxford.
- Price Waterhouse Coopers (2014) *Sports Outlook for North America*, <http://www.pwc.com/us/en/industry/entertainment-media/publications/sports-outlook-north-america.jhtml> (Accessed March 28, 2015)
- Raney, Arthur and Bryant, Jennings (2009) *Handbook of Sports and Media*, Routledge: New York.
- Reid, Caroline and Sylt, Christian (2006) *The Business of Formula One*, Sports Business: Charlotte.
- Reid, Caroline and Sylt, Christian (2007) *Formula Money*, CNC Communications: West Sussex.
- Rein, Irving, Kotler, Philip and Shields, Ben (2006) *The Elusive Fan*, McGraw-Hill: New York.
- Relevant Insights (2011) *When Using a Focus Group Makes Sense*, <http://www.relevantinsights.com/tag/Michaela-mora/4-22-2011> (Accessed April 15, 2014)
- Rencken, Dieter and Fischer (2012) *Driver or Team? Fan Behavior from a Marketing Perspective*, <http://www.motor-total.com> (Accessed April 2, 2014)
- Rencken, Dieter, Fritzache, M and Luttgens, M. (2012) *Advertising in Formula 1: Difficult to Reach Measurement*, <http://www.motor-total.com> (Accessed August 15, 2014)
- Rencken, Dieter and Haidinger (2012) *Formula 1 as an Economic Engine*, <http://www.motor-total.com> (Accessed November 22, 2014)
- Research Assistant (2014) *The Relationship between the Research Question, Hypotheses, Specific Aims and Long Term Goals of the Project*, <http://www.theresearchassistant.com/tutorial/2-1asp> (Accessed August 1, 2014)
- Rex, John (2010) *The Ethnicity Reader: Nationalism, Multiculturalism and Migration*, Polity Press: Cambridge.
- Ritzer, George (2010) *Globalization: A Basic Text*, John Wiley & Sons Ltd.: Hoboken
- Rosenberg, Matthew (2004) *The Handy Geography Answer Book*, Barnes and Noble Books: New York

- Saward, J. (2013a) *The TV Markets of Today and Tomorrow*, <http://www.joesaward.wordpress.com/2013/11/11/the-tv-markets-of-today-and-tomorrow/> (Accessed November 4, 2013)
- Saward, J. (2013b) *The Values of a F1 Budget Cap*, <http://www.joe.saward.wordpress/2013/11/27/the-values-of-an-f1-budget-cap/> (Accessed November 27, 2013)
- Saward, J. (2014c) *F1 and America*, <http://www.joesaward.wordpass/2014/8/29/f1-and-america/> (Accessed August 29, 2014)
- Saward, J. (2013d) *How Much Money Does Marussia Gain From 2013*, <http://www.joesaward.wordpress/2013/11/27/how-much-money-does-marussia-gain-from-2013/> (Accessed November 27, 2013)
- Scheuerman, William (2006) 'Globalization', <http://plato.stanford.edu/entries/globalization/> (Accessed August 18, 2010)
- Schoenberger, Erica (1997) *The Cultural Crisis of the Firm*, Blackwell Publishers: Oxford.
- Scholte, Jan Aart (1993) *International Relations of Social Change*, Open University Press: Milton Keynes.
- Scholte, Jan Aart (2000), *Globalization: A Critical Introduction*. Palgrave Macmillan: London.
- Shrugan, Matthew (2009) 'Globalization and the Transcendence of Democracy', <https://lurj.org/issues/volume-4-number-2/globalization> (Accessed July 9, 2011)
- Silk, Michael, Andrews, David L., and Cole, C. L. (2005) *Sport and Corporate Nationalisms*, Berg: Oxford.
- Silk, Michael and Andrews, David L. (2001) 'Beyond a Boundary? Sport, Transnational Advertising, and the Reimagining of National Culture', *Journal of Sport and Social Issues*, Volume 25, Number 2, pp.180-201.
- Slack, Trevor (2004) *The Commercialization of Sport*, Routledge: New York, 34.
- Smart, Barry (2005) *The Sports Star: Modern Sport and the Cultural Economy of Sports Celebrity*, Sage Publications: Thousand Oaks.
- Smart, Barry (2009) *The Rise of the Global Corporate Sport Media Complex*, Sage Publications: Thousand Oaks.
- Smith, Neil (2005) *The Endgame of Globalization*, Routledge: London.
- Spector, Paul E. (1981) *Research Designs*, Sage Publications: Thousand Oaks.
- Speed TV (2008) *Only Government Can Save Canada GP*, <http://www.speedtv.com> (Accessed November 10, 2008)
- Sports Business (2007) *India to Host 2010 GP*, <http://www.sportbusiness.com> (Accessed April 12, 2009)
- Sports Business Daily (2010) *Top 25 Sports Spenders, their Ad Spending, etc.*, <http://www.sportsbusinessdaily.com/Journal/Issues/2010/05/20100510/SBJ-In-Depth/Top-25> (Accessed September 10, 2013)

- Sports Business Daily (2013) *Santander's Enrique Arribas Say Sponsorship Deal*, <http://www.sportsbusinessdaily.com/Global/Issues/2013/11/20/Marketing-and-Sponsorships/> (Accessed November 21, 2013)
- Sports Business Daily (2013) *Ferrari's Renato Bisignani Say's F1 Team's Consistency Vital to Attract Sponsors with Ferrari More Than Color Red*, <http://www.sportsbusinessdaily.com/Global/Issues/2013/11/15/Marketing-and-Sponsorships/> (Accessed November 21, 2013)
- Sports Economics (2008) *Government Contributions to F1*, <http://www.sportseconomics.com> (Accessed March 3, 2014)
- Sport Features (2010) *Match on again for TV Rating Title - World Cup v Olympic Games*, <http://www.sportsfeatures.com/olympicsnews/story/46944/john-goodbody-match-on-again-for-tv-ratings-title-world-cup-v-olympic-games> (Accessed November 5, 2013)
- Statista (2015) *Global Statistics*, <http://www.statista.com> (Accessed January 28, 2016)
- Steingard, D. and Fitzgibbons, D. (1995) Challenging the juggernaut of globalization: a manifesto for academic praxis, <http://www.emeraldinsight.com/doi/abs/10.1108/09534819510090204> (Accessed January 21, 2013).
- Stigler, George A. (1964) 'A Theory of Oligopoly', *Journal of Political Economy*, Volume 72, Number 1, pp. 44-61.
- Stiglitz, Joseph E. (2005) *Making Globalization Work*, W.W. Norton & Company: New York.
- Sturgeon, T. And van Biesebroeck, J. (2008) *Value Chains, Networks, and Clusters: Reframing the Global Automotive Industry*, <http://joeg.oxfordjournals.org/content/8/3/297.short> (accessed October 29, 2015)
- Sweeney, John (2007) *Sports Cast: Ten Controversial Issues*, <https://www.questia.com/magazine/1G1-156653115/sportscast-10-controversial-issues-confronting-the> (Accessed September 10, 2010)
- Sylt, Christian (2013a) 'High-Priced Formula', *Autoweek*, April, 2013 edition, pp. 59-60.
- Sylt, Christian (2013b) 'The Road to Riches: Ecclestone's Rise to Power', *Autoweek*, April, 2013 edition, pp. 55-58.
- Sylt, Christian (2013c) 'Putting on the Show', *Autoweek*, May, 2013 edition, pp. 62-63.
- Sylt, Christian (2013d) 'Feeding the Beast', *Autoweek*, August, 2013 edition, pp. 75-76.
- Synovate (2006) *Does Sponsorship Work?* <http://www.synovate.com> (Accessed June 3, 2007)
- TSN (2009) *Negotiations Underway for Return of Canadian Grand Prix*, <http://www.tsn.com> (Accessed December 11, 2009)
- Tefft, S. (1980). *Secrecy: A Cross-Cultural Perspective*, <http://www.3.nd.edu/~jneyrey1/secrecy.html> (Accessed June 7, 2013)

The Richest (2011) *Top 5 Highest Earning Sport Teams*,
<http://www.therichest.com/sports/top-5-highest-earning-sports-teams-2011/> (Accessed November 2, 2013)

Time (2005) *Very Rapid Response*, <http://www.time.com> (Accessed June 1, 2012)

Tomlinson, Alan and Young, Christopher (2006) *National Identity and Global Sports and Events*, State University of New York Press: New York

Top End Sports (2013a) *The Sport and Science Resource: List of Sports*,
<http://www.topendsports.com/sports/sport-list.htm> (Accessed October 12, 2013)

Top End Sports (2013b) *Largest Sporting Crowds*,
<http://www.topendsports.com/world/lists/crowd-largest.htm> (Accessed November 1, 2013)

Torrance, Morag (2007) *The Power of Governance in Financial Relationships: Governing Tensions in Exotic Infrastructure Territory*,
<http://onlinelibrary.wiley.com/doi/10.1111/j.1468-2257.2007.00392.x/full> (Accessed October 18, 2016)

Torrance, Morag (2008) *The Rise of a Global Infrastructure Market through Relational Investing*, <http://onlinelibrary.wiley.com/doi/10.1111/j.1944-8287.2008.01004.x/full> (Accessed September 12, 2016)

Tsoutsoura, M (2004) *Corporate Social Responsibility and Financial Performance*, Haas: University of California at Berkley.

Ungor, Murat (2008) *Globalization and Society*, University of Southern California: Los Angeles.

University of Southern California (2014) *Organizing Your Social Sciences Research Paper*, <http://www.libguides.usc.edu/content.php?pid=83009&sid=616083> (Accessed July 28, 2014)

Unknown (2006) 'Special issue: Sports mega-events, *Sociological Review*, Blackwell-Synergy Publishers: Hoboken.

Unknown (2013) *The World's Most Popular Sports: International Olympic Committee*, <http://www.johann-sandra.com/popular.htm> Accessed November 1, 2013)

van der Roest (2015) 'Mixed Methods in Emerging Academic Sub-disciplines: The Case of Sports Management', *Journal of Mixed Methods Research* Volume 9, Number 1, pp. 70-90.

Vanity Fair (2012) www.vanityfair.com/culture/2012/11/formula-one-racing-comes-to-america (Accessed December 13, 2015)

Verity, Julie (2002) 'Maximizing the Market Potential of Sponsorship for Global Brands', *European Business Journal*, Volume 14, Number 4, pp. 161-73.

Wall Street Journal (2006) *Ferrari Set Pace for Surgeons*,
<http://www.thewallstreetjournalonline.com> (accessed September 11, 2012)

Weaver, Warren (1948) *Science & Complexity*,
<http://people.physics.anu.edu.au/~tas110/Teaching/Lectures/L1/Material/WEAVER1947.pdf> (Accessed February 15, 2015)

- World Economic Forum (2007) *World Economic Forum Annual Report 2006-07*, <http://www.weforum.org> (Accessed January 23, 2008)
- Weiss, C. (1994) *Evaluation Methods for Studying Programs and Policies*, Prentice-Hall: Upper Saddle River.
- Wenner, Lawrence (2000) *Media Sport*, Routledge: New York.
- Whitson, D. and MacIntosh, D. (1990) *The Game Planners: Transforming Canada's Sports System*, McGill-Queen's University Press: Montreal.
- Wikipedia (2007) *Globalization* (definition), <http://www.wikipedia.org> (Accessed December 10, 2007)
- Wikipedia (2013) *Monopoly* (definition) <http://www.en.wikipedia.org/wiki/Monopoly> (Accessed June 24, 2013)
- Williamson, Peter J., Ramamuri, Ravi, Fleury, Alfonso, and Leme Fleury, Maria Tereza (2008) *The Competitive Advantage of Emerging Market Multinationals*, Cambridge Publishing: Cambridge.
- Wolf, Martin (2004) *Why Globalization Works*, Yale University Press: New Haven.
- World Atlas (2013) World Populations <http://www.worldatlas.com/citypop.htm> (Accessed July 28, 2013)
- World Atlas (2015) www.worldatlas.com (Accessed November 16, 2015)
- Worrell, Jim (2014) *How to Win the Olympics of Business*, <http://www.ameristart.com> (Accessed January 26, 2015)
- Youtie, J., Shapira, P., and Porter, A. (2008) 'Nanotechnology Publications and Citations by Leading Countries and Blocs', *Journal of Nanoparticle Research*, Volume 10, Number 6.
- Zachs, Stephen (2007) *The Global Contract*, Metropolis: Los Angeles.
- Zhuang, Jun (2008) *Modeling Secrecy and Deception in Homeland Security Resource Allocation*, Pro Quest: Ann Arbor.